SEQUENCE LISTING

<110> BayerHealthcare AG

<120> METHODS AND KITS FOR INVESTIGATING CANCER

<130> BHC-0301001-fc
<150> EP 03022587.4
<151> 2003-10-06
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Tyr Val Asn Lys Arg Asn Thr Thr Trp Gln Ala Gly His Asn Phe Tyr
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Asn Val Asp Met Ser Tyr Leu Lys Arg Leu Cys Gly Thr Phe Leu Gly
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Gly Pro Lys Pro Pro Gln Arg Val Met Phe Thr Glu Asp Leu Lys Leu
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Pro Ala Ser Phe Asp Ala Arg Glu Gln Trp Pro Gln Cys Pro Thr Ile
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Lys Glu Ile Arg Asp Gln Gly Ser Cys Gly Ser Cys Trp Ala Phe Gly
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Ala Val Glu Ala Ile Ser Asp Arg Ile Cys Ile His Thr Asn Ala His
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Met Cys Gly Asp Gly Cys Asn Gly Gly Tyr Pro Ala Glu Ala Trp Asn
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Phe Trp Thr Arg Lys Gly Leu Val Ser Gly Gly Leu Tyr Glu Ser His
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Val Gly Cys Arg Pro Tyr Ser Ile Pro Pro Cys Glu His His Val Asn
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Gly Ser Arg Pro Pro Cys Thr Gly Glu Gly Asp Thr Pro Lys Cys Ser
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Lys Ile Cys Glu Pro Gly Tyr Ser Pro Thr Tyr Lys Gln Asp Lys His
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Tyr Gly Tyr Asn Ser Tyr Ser Val Ser Asn Ser Glu Lys Asp Ile Met
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Ala Glu Ile Tyr Lys Asn Gly Pro Val Glu Gly Ala Phe Ser Val Tyr
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Ser Asp Phe Leu Leu Tyr Lys Ser Gly Val Tyr Gln His Val Thr Gly
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Glu Met Met Gly Gly His Ala Ile Arg Ile Leu Gly Trp Gly Val Glu
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Gly Asp Asn Gly Phe Phe Lys Ile Leu Arg Gly Gln Asp His Cys Gly
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Val Glu Asp Lys Glu Glu Glu Asp Val Ser Gly Glu Pro Glu Ala Ser
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Pro Ser Ala Asp Thr Thr Ile Leu Phe Val Lys Gly Glu Asp Phe Pro
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Glu Asp Phe Ile Val Glu Ser Leu Asp Ala Ser Phe Arg Tyr Pro Gln
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Asp His Gln Phe Tyr Ile Gln Asn Phe Thr Ala Leu Pro Leu Asn Thr
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Val Val Pro Pro Gln Arg Gln Ala Thr Phe Glu Tyr Ser Phe Ile Pro
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Tyr Lys Asp Leu Asn Gly Asn Val Phe Gln Asp Ala Val Phe Asn Gln
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Thr Val Thr Val Ile Glu Arg Glu Asp Gly Leu Asp Gly Glu Thr Ile
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Phe Met Tyr Met Phe Leu Ala Gly Leu Gly Leu Leu Val Ile Val Gly
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Leu His Gln Leu Leu Glu Ser Arg Lys Arg Lys Arg Pro Ile Gln Lys
225                 230                 235                 240
Val Glu Met Gly Thr Ser Ser Gln Asn Asp Val Asp Met Ser Trp Ile
                245                 250                 255
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Ile Lys Glu Ser Asp Thr Gly Leu Ala Pro Pro Ala Leu Trp Asp Leu
65                  70                  75                  80
Ala Ala Asp Lys Gln Thr Leu Gln Ser Glu Gln Pro Leu Gln Val Ala
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Arg Cys Thr Lys Ile Ile Asn Ala Asp Ser Glu Asp Pro Lys Tyr Ile
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Ile Asn Val Lys Gln Phe Ala Lys Phe Val Val Asp Leu Ser Asp Gln
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Val Ala Pro Thr Asp Ile Glu Glu Gly Met Arg Val Gly Val Asp Arg
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Thr Pro Leu Leu His Pro Glu Arg Phe Val Asn Leu Gly Ile Glu Pro
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Pro Lys Gly Val Leu Leu Phe Gly Pro Pro Gly Thr Gly Lys Thr Leu
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Gln Glu Asn Arg Asn Asn Gln Gly Thr Val Asn Trp Ser Val Asp Asp
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Ile Val Lys Gly Ile Asn Ser Ser Asn Val Glu Asn Gln Leu Gln Ala
85 90 95
Thr Gln Ala Ala Arg Lys Leu Leu Ser Arg Glu Lys Gln Pro Pro Ile
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His Ile Ser Glu Gln Ala Val Trp Ala Leu Gly Asn Ile Ala Gly Asp
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Gly Ser Val Phe Arg Asp Leu Val Ile Lys Tyr Gly Ala Val Asp Pro
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Tyr Leu Arg Asn Leu Thr Trp Thr Leu Ser Asn Leu Cys Arg Asn Lys
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Leu Ala Val Phe Pro Ser Leu Leu Thr Asn Pro Lys Thr Asn Ile Gln
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Lys Glu Ala Thr Trp Thr Met Ser Asn Ile Thr Ala Gly Arg Gln Asp
        355                 360                 365
Gln Ile Gln Gln Val Val Asn His Gly Leu Val Pro Phe Leu Val Ser
    370                 375                 380
Val Leu Ser Lys Ala Asp Phe Lys Thr Gln Lys Glu Ala Val Trp Ala
385                 390                 395                 400
Val Thr Asn Tyr Thr Ser Gly Gly Thr Val Glu Gln Ile Val Tyr Leu
                405                 410                 415
Val His Cys Gly Ile Ile Glu Pro Leu Met Asn Leu Leu Thr Ala Lys
            420                 425                 430
Asp Thr Lys Ile Ile Leu Val Ile Leu Asp Ala Ile Ser Asn Ile Phe
        435                 440                 445
Gln Ala Ala Glu Lys Leu Gly Glu Thr Glu Lys Leu Ser Ile Met Ile
    450                 455                 460
Glu Glu Cys Gly Gly Leu Asp Lys Ile Glu Ala Leu Gln Asn His Glu
465                 470                 475                 480
Asn Glu Ser Val Tyr Lys Ala Ser Leu Ser Leu Ile Glu Lys Tyr Phe
                485                 490                 495
Ser Val Glu Glu Glu Glu Asp Gln Asn Val Val Pro Glu Thr Thr Ser
            500                 505                 510
Glu Gly Tyr Thr Phe Gln Val Gln Asp Gly Ala Pro Gly Thr Phe Asn
        515                 520                 525
Phe
```

<210> 170
<211> 971
<212> PRT
<213> Homo sapiens
<400> 170

```
Met Glu Leu Ser Asp Ala Asn Leu Gln Thr Leu Thr Glu Tyr Leu Lys
1               5                   10                  15
Lys Thr Leu Asp Pro Asp Pro Ala Ile Arg Arg Pro Ala Glu Lys Phe
            20                  25                  30
Leu Glu Ser Val Glu Gly Asn Gln Asn Tyr Pro Leu Leu Leu Leu Thr
        35                  40                  45
Leu Leu Glu Lys Ser Gln Asp Asn Val Ile Lys Val Cys Ala Ser Val
    50                  55                  60
Thr Phe Lys Asn Tyr Ile Lys Arg Asn Trp Arg Ile Val Glu Asp Glu
65                  70                  75                  80
Pro Asn Lys Ile Cys Glu Ala Asp Arg Val Ala Ile Lys Ala Asn Ile
                85                  90                  95
Val His Leu Met Leu Ser Ser Pro Glu Gln Ile Gln Lys Gln Leu Ser
            100                 105                 110
Asp Ala Ile Ser Ile Ile Gly Arg Glu Asp Phe Pro Gln Lys Trp Pro
        115                 120                 125
Asp Leu Leu Thr Glu Met Val Asn Arg Phe Gln Ser Gly Asp Phe His
    130                 135                 140
Val Ile Asn Gly Val Leu Arg Thr Ala His Ser Leu Phe Lys Arg Tyr
145                 150                 155                 160
Arg His Glu Phe Lys Ser Asn Glu Leu Trp Thr Glu Ile Lys Leu Val
                165                 170                 175
Leu Asp Ala Phe Ala Leu Pro Leu Thr Asn Leu Phe Lys Ala Thr Ile
            180                 185                 190
Glu Leu Cys Ser Thr His Ala Asn Asp Ala Ser Ala Leu Arg Ile Leu
        195                 200                 205
Phe Ser Ser Leu Ile Leu Ile Ser Lys Leu Phe Tyr Ser Leu Asn Phe
    210                 215                 220
Gln Asp Leu Pro Glu Phe Phe Glu Asp Asn Met Glu Thr Trp Met Asn
225                 230                 235                 240
Asn Phe His Thr Leu Leu Thr Leu Asp Asn Lys Leu Leu Gln Thr Asp
```

```
                    245                 250                 255
Asp Glu Glu Glu Ala Gly Leu Leu Glu Leu Leu Lys Ser Gln Ile Cys
                260                 265                 270
Asp Asn Ala Ala Leu Tyr Ala Gln Lys Tyr Asp Glu Glu Phe Gln Arg
            275                 280                 285
Tyr Leu Pro Arg Phe Val Thr Ala Ile Trp Asn Leu Leu Val Thr Thr
        290                 295                 300
Gly Gln Glu Val Lys Tyr Asp Leu Leu Val Ser Asn Ala Ile Gln Phe
305                 310                 315                 320
Leu Ala Ser Val Cys Glu Arg Pro His Tyr Lys Asn Leu Phe Glu Asp
                325                 330                 335
Gln Asn Thr Leu Thr Ser Ile Cys Glu Lys Val Ile Val Pro Asn Met
            340                 345                 350
Glu Phe Arg Ala Ala Asp Glu Glu Ala Phe Glu Asp Asn Ser Glu Glu
        355                 360                 365
Tyr Ile Arg Arg Asp Leu Glu Gly Ser Asp Ile Asp Thr Arg Arg Arg
    370                 375                 380
Ala Ala Cys Asp Leu Val Arg Gly Leu Cys Lys Phe Phe Glu Gly Pro
385                 390                 395                 400
Val Thr Gly Ile Phe Ser Gly Tyr Val Asn Ser Met Leu Gln Glu Tyr
                405                 410                 415
Ala Lys Asn Pro Ser Val Asn Trp Lys His Lys Asp Ala Ala Ile Tyr
            420                 425                 430
Leu Val Thr Ser Leu Ala Ser Lys Ala Gln Thr Gln Lys His Gly Ile
        435                 440                 445
Thr Gln Ala Asn Glu Leu Val Asn Leu Thr Glu Phe Phe Val Asn His
    450                 455                 460
Ile Leu Pro Asp Leu Lys Ser Ala Asn Val Asn Glu Phe Pro Val Leu
465                 470                 475                 480
Lys Ala Asp Gly Ile Lys Tyr Ile Met Ile Phe Arg Asn Gln Val Pro
                485                 490                 495
Lys Glu His Leu Leu Val Ser Ile Pro Leu Leu Ile Asn His Leu Gln
            500                 505                 510
Ala Glu Ser Ile Val Val His Thr Tyr Ala Ala His Ala Leu Glu Arg
        515                 520                 525
Leu Phe Thr Met Arg Gly Pro Asn Asn Ala Thr Leu Phe Thr Ala Ala
    530                 535                 540
Glu Ile Ala Pro Phe Val Glu Ile Leu Leu Thr Asn Leu Phe Lys Ala
545                 550                 555                 560
Leu Thr Leu Pro Gly Ser Ser Glu Asn Glu Tyr Ile Met Lys Ala Ile
                565                 570                 575
Met Arg Ser Phe Ser Leu Leu Gln Glu Ala Ile Ile Pro Tyr Ile Pro
            580                 585                 590
Thr Leu Ile Thr Gln Leu Thr Gln Lys Leu Leu Ala Val Ser Lys Asn
        595                 600                 605
Pro Ser Lys Pro His Phe Asn His Tyr Met Phe Glu Ala Ile Cys Leu
    610                 615                 620
Ser Ile Arg Ile Thr Cys Lys Ala Asn Pro Ala Ala Val Val Asn Phe
625                 630                 635                 640
Glu Glu Ala Leu Phe Leu Val Phe Thr Glu Ile Leu Gln Asn Asp Val
                645                 650                 655
Gln Glu Phe Ile Pro Tyr Val Phe Gln Val Met Ser Leu Leu Glu Glu
            660                 665                 670
Thr His Lys Asn Asp Ile Pro Ser Ser Tyr Met Ala Leu Phe Pro His
        675                 680                 685
Leu Leu Gln Pro Val Leu Trp Glu Arg Thr Gly Asn Ile Pro Ala Leu
    690                 695                 700
Val Arg Leu Leu Gln Ala Phe Leu Glu Arg Gly Ser Asn Thr Ile Ala
705                 710                 715                 720
Ser Ala Ala Ala Asp Lys Ile Pro Gly Leu Leu Gly Val Phe Gln Lys
                725                 730                 735
Leu Ile Ala Ser Lys Ala Asn Asp His Gln Gly Phe Tyr Leu Leu Asn
            740                 745                 750
Ser Ile Ile Glu His Met Pro Pro Glu Ser Val Asp Gln Tyr Arg Lys
        755                 760                 765
Gln Ile Phe Ile Leu Leu Phe Gln Arg Leu Gln Asn Ser Lys Thr Thr
    770                 775                 780
Lys Phe Ile Lys Ser Phe Leu Val Phe Ile Asn Leu Tyr Cys Ile Lys
785                 790                 795                 800
```

```
Tyr Gly Ala Leu Ala Leu Gln Glu Ile Phe Asp Gly Ile Gln Pro Lys
                805                 810                 815
Met Phe Gly Met Val Leu Glu Lys Ile Ile Ile Pro Glu Ile Gln Lys
            820                 825                 830
Val Ser Gly Asn Val Glu Lys Lys Ile Cys Ala Val Gly Ile Thr Lys
        835                 840                 845
Leu Leu Thr Glu Cys Pro Pro Met Met Asp Thr Glu Tyr Thr Lys Leu
    850                 855                 860
Trp Thr Pro Leu Leu Gln Ser Leu Ile Gly Leu Phe Glu Leu Pro Glu
865                 870                 875                 880
Asp Asp Thr Ile Pro Asp Glu Glu His Phe Ile Asp Ile Glu Asp Thr
                885                 890                 895
Pro Gly Tyr Gln Thr Ala Phe Ser Gln Leu Ala Phe Ala Gly Lys Lys
            900                 905                 910
Glu His Asp Pro Val Gly Gln Met Val Asn Asn Pro Lys Ile His Leu
        915                 920                 925
Ala Gln Ser Leu His Lys Leu Ser Thr Ala Cys Pro Gly Arg Val Pro
    930                 935                 940
Ser Met Val Ser Thr Ser Leu Asn Ala Glu Ala Leu Gln Tyr Leu Gln
945                 950                 955                 960
Gly Tyr Leu Gln Ala Ala Ser Val Thr Leu Leu
                965                 970
```

<210> 171
<211> 184
<212> PRT
<213> Homo sapiens
<400> 171

```
Met Pro Gln Ser Lys Ser Arg Lys Ile Ala Ile Leu Gly Tyr Arg Ser
1               5                   10                  15
Val Gly Lys Ser Ser Leu Thr Ile Gln Phe Val Glu Gly Gln Phe Val
            20                  25                  30
Asp Ser Tyr Asp Pro Thr Ile Glu Asn Thr Phe Thr Lys Leu Ile Thr
        35                  40                  45
Val Asn Gly Gln Glu Tyr His Leu Gln Leu Val Asp Thr Ala Gly Gln
    50                  55                  60
Asp Glu Tyr Ser Ile Phe Pro Gln Thr Tyr Ser Ile Asp Ile Asn Gly
65                  70                  75                  80
Tyr Ile Leu Val Tyr Ser Val Thr Ser Ile Lys Ser Phe Glu Val Ile
                85                  90                  95
Lys Val Ile His Gly Lys Leu Leu Asp Met Val Gly Lys Val Gln Ile
            100                 105                 110
Pro Ile Met Leu Val Gly Asn Lys Lys Asp Leu His Met Glu Arg Val
        115                 120                 125
Ile Ser Tyr Glu Glu Gly Lys Ala Leu Ala Glu Ser Trp Asn Ala Ala
    130                 135                 140
Phe Leu Glu Ser Ser Ala Lys Glu Asn Gln Thr Ala Val Asp Val Phe
145                 150                 155                 160
Arg Arg Ile Ile Leu Glu Ala Glu Lys Met Asp Gly Ala Ala Ser Gln
                165                 170                 175
Gly Lys Ser Ser Cys Ser Val Met
            180
```

<210> 172
<211> 514
<212> PRT
<213> Homo sapiens
<400> 172

```
Met Ala Asp Ala Glu Val Ile Ile Leu Pro Lys Lys His Lys Lys Lys
1               5                   10                  15
Lys Glu Arg Lys Ser Leu Pro Glu Glu Asp Val Ala Glu Ile Gln His
            20                  25                  30
Ala Glu Glu Phe Leu Ile Lys Pro Glu Ser Lys Val Ala Lys Leu Asp
        35                  40                  45
Thr Ser Gln Trp Pro Leu Leu Leu Lys Asn Phe Asp Lys Leu Asn Val
    50                  55                  60
Arg Thr Thr His Tyr Thr Pro Leu Ala Cys Gly Ser Asn Pro Leu Lys
65                  70                  75                  80
Arg Glu Ile Gly Asp Tyr Ile Arg Thr Gly Phe Ile Asn Leu Asp Lys
```

```
                85                  90                  95
Pro Ser Asn Pro Ser Ser His Glu Val Val Ala Trp Ile Arg Arg Ile
            100                 105                 110
Leu Arg Val Glu Lys Thr Gly His Ser Gly Thr Leu Asp Pro Lys Val
        115                 120                 125
Thr Gly Cys Leu Ile Val Cys Ile Glu Arg Ala Thr Arg Leu Val Lys
    130                 135                 140
Ser Gln Gln Ser Ala Gly Lys Glu Tyr Val Gly Ile Val Arg Leu His
145                 150                 155                 160
Asn Ala Ile Glu Gly Gly Thr Gln Leu Ser Arg Ala Leu Glu Thr Leu
                165                 170                 175
Thr Gly Ala Leu Phe Gln Arg Pro Pro Leu Ile Ala Ala Val Lys Arg
            180                 185                 190
Gln Leu Arg Val Arg Thr Ile Tyr Glu Ser Lys Met Ile Glu Tyr Asp
        195                 200                 205
Pro Glu Arg Arg Leu Gly Ile Phe Trp Val Ser Cys Glu Ala Gly Thr
    210                 215                 220
Tyr Ile Arg Thr Leu Cys Val His Leu Gly Leu Leu Leu Gly Val Gly
225                 230                 235                 240
Gly Gln Met Gln Glu Leu Arg Arg Val Arg Ser Gly Val Met Ser Glu
                245                 250                 255
Lys Asp His Met Val Thr Met His Asp Val Leu Asp Ala Gln Trp Leu
            260                 265                 270
Tyr Asp Asn His Lys Asp Glu Ser Tyr Leu Arg Arg Val Val Tyr Pro
        275                 280                 285
Leu Glu Lys Leu Leu Thr Ser His Lys Arg Leu Val Met Lys Asp Ser
    290                 295                 300
Ala Val Asn Ala Ile Cys Tyr Gly Ala Lys Ile Met Leu Pro Gly Val
305                 310                 315                 320
Leu Arg Tyr Glu Asp Gly Ile Glu Val Asn Gln Glu Ile Val Val Ile
                325                 330                 335
Thr Thr Lys Gly Glu Ala Ile Cys Met Ala Ile Ala Leu Met Thr Thr
            340                 345                 350
Ala Val Ile Ser Thr Cys Asp His Gly Ile Val Ala Lys Ile Lys Arg
        355                 360                 365
Val Ile Met Glu Arg Asp Thr Tyr Pro Arg Lys Trp Gly Leu Gly Pro
    370                 375                 380
Lys Ala Ser Gln Lys Lys Leu Met Ile Lys Gln Gly Leu Leu Asp Lys
385                 390                 395                 400
His Gly Lys Pro Thr Asp Ser Thr Pro Ala Thr Trp Lys Gln Glu Tyr
                405                 410                 415
Val Asp Tyr Ser Glu Ser Ala Lys Lys Glu Val Val Ala Glu Val Val
            420                 425                 430
Lys Ala Pro Gln Val Val Ala Glu Ala Ala Lys Thr Ala Lys Arg Lys
        435                 440                 445
Arg Glu Ser Glu Ser Glu Ser Asp Glu Thr Pro Pro Ala Ala Pro Gln
    450                 455                 460
Leu Ile Lys Lys Glu Lys Lys Lys Ser Lys Lys Asp Lys Lys Ala Lys
465                 470                 475                 480
Ala Gly Leu Glu Ser Gly Ala Glu Pro Gly Asp Gly Asp Ser Asp Thr
                485                 490                 495
Thr Lys Lys Lys Lys Lys Lys Lys Lys Ala Lys Glu Val Glu Leu Val
            500                 505                 510
Ser Glu
```

<210> 173
<211> 258
<212> PRT
<213> Homo sapiens
<400> 173

```
Met Leu Pro Leu Cys Leu Val Ala Ala Leu Leu Leu Ala Ala Gly Pro
1                   5                  10                  15
Gly Pro Ser Leu Gly Asp Glu Ala Ile His Cys Pro Pro Cys Ser Glu
            20                  25                  30
Glu Lys Leu Ala Arg Cys Arg Pro Pro Val Gly Cys Glu Glu Leu Val
        35                  40                  45
Arg Glu Ala Gly Cys Gly Cys Cys Ala Thr Cys Ala Leu Gly Leu Gly
    50                  55                  60
```

```
Met Pro Cys Gly Val Tyr Thr Pro Arg Cys Gly Ser Gly Leu Arg Cys
65                  70                  75                  80
Tyr Pro Pro Arg Gly Val Glu Lys Pro Leu His Thr Leu Met His Gly
                85                  90                  95
Gln Gly Val Cys Met Glu Leu Ala Glu Ile Glu Ala Ile Gln Glu Ser
            100                 105                 110
Leu Gln Pro Ser Asp Lys Asp Glu Gly Asp His Pro Asn Asn Ser Phe
        115                 120                 125
Ser Pro Cys Ser Ala His Asp Arg Arg Cys Leu Gln Lys His Phe Ala
    130                 135                 140
Lys Ile Arg Asp Arg Ser Thr Ser Gly Gly Lys Met Lys Val Asn Gly
145                 150                 155                 160
Ala Pro Arg Glu Asp Ala Arg Pro Val Pro Gln Gly Ser Cys Gln Ser
                165                 170                 175
Glu Leu His Arg Ala Leu Glu Arg Leu Ala Ala Ser Gln Ser Arg Thr
            180                 185                 190
His Glu Asp Leu Tyr Phe Ile Pro Ile Pro Asn Cys Asp Arg Asn Gly
        195                 200                 205
Asn Phe His Pro Lys Gln Cys His Pro Ala Leu Asp Gly Gln Arg Gly
    210                 215                 220
Lys Cys Trp Cys Val Asp Arg Lys Thr Gly Val Lys Leu Pro Gly Gly
225                 230                 235                 240
Leu Glu Pro Lys Gly Glu Leu Asp Cys His Gln Leu Ala Asp Ser Phe
                245                 250                 255
Arg Glu
```

<210> 174
<211> 1233
<212> PRT
<213> Homo sapiens
<400> 174

```
Met Gly Phe Leu Lys Leu Ile Glu Ile Glu Asn Phe Lys Ser Tyr Lys
1               5                   10                  15
Gly Arg Gln Ile Ile Gly Pro Phe Gln Arg Phe Thr Ala Ile Ile Gly
            20                  25                  30
Pro Asn Gly Ser Gly Lys Ser Asn Leu Met Asp Ala Ile Ser Phe Val
        35                  40                  45
Leu Gly Glu Lys Thr Ser Asn Leu Arg Val Lys Thr Leu Arg Asp Leu
    50                  55                  60
Ile His Gly Ala Pro Val Gly Lys Pro Ala Ala Asn Arg Ala Phe Val
65                  70                  75                  80
Ser Met Val Tyr Ser Glu Glu Gly Ala Glu Asp Arg Thr Phe Ala Arg
                85                  90                  95
Val Ile Val Gly Gly Ser Ser Glu Tyr Lys Ile Asn Asn Lys Val Val
            100                 105                 110
Gln Leu His Glu Tyr Ser Glu Glu Leu Glu Lys Leu Gly Ile Leu Ile
        115                 120                 125
Lys Ala Arg Asn Phe Leu Val Phe Gln Gly Ala Val Glu Ser Ile Ala
    130                 135                 140
Met Lys Asn Pro Lys Glu Arg Thr Ala Leu Phe Glu Glu Ile Ser Arg
145                 150                 155                 160
Ser Gly Glu Leu Ala Gln Glu Tyr Asp Lys Arg Lys Lys Glu Met Val
                165                 170                 175
Lys Ala Glu Glu Asp Thr Gln Phe Asn Tyr His Arg Lys Lys Asn Ile
            180                 185                 190
Ala Ala Glu Arg Lys Glu Ala Lys Gln Glu Lys Glu Glu Ala Asp Arg
        195                 200                 205
Tyr Gln Arg Leu Lys Asp Glu Val Val Arg Ala Gln Val Gln Leu Gln
    210                 215                 220
Leu Phe Lys Leu Tyr His Asn Glu Val Glu Ile Glu Lys Leu Asn Lys
225                 230                 235                 240
Glu Leu Ala Ser Lys Asn Lys Glu Ile Glu Lys Asp Lys Lys Arg Met
                245                 250                 255
Asp Lys Val Glu Asp Glu Leu Lys Glu Lys Lys Lys Glu Leu Gly Lys
            260                 265                 270
Met Met Arg Glu Gln Gln Gln Ile Glu Lys Glu Ile Lys Glu Lys Asp
        275                 280                 285
Ser Glu Leu Asn Gln Lys Arg Pro Gln Tyr Ile Lys Ala Lys Glu Asn
```

290 295 300
Thr Ser His Lys Ile Lys Lys Leu Glu Ala Ala Lys Lys Ser Leu Gln
305 310 315 320
Asn Ala Gln Lys His Tyr Lys Lys Arg Lys Gly Asp Met Asp Glu Leu
325 330 335
Glu Lys Glu Met Leu Ser Val Glu Lys Ala Arg Gln Glu Phe Glu Glu
340 345 350
Arg Met Glu Glu Glu Ser Gln Ser Gln Gly Arg Asp Leu Thr Leu Glu
355 360 365
Glu Asn Gln Val Lys Lys Tyr His Arg Leu Lys Glu Glu Ala Ser Lys
370 375 380
Arg Ala Ala Thr Leu Ala Gln Glu Leu Glu Lys Phe Asn Arg Asp Gln
385 390 395 400
Lys Ala Asp Gln Asp Arg Leu Asp Leu Glu Glu Arg Lys Lys Val Glu
405 410 415
Thr Glu Ala Lys Ile Lys Gln Lys Leu Arg Glu Ile Glu Glu Asn Gln
420 425 430
Lys Arg Ile Glu Lys Leu Glu Glu Tyr Ile Thr Thr Ser Lys Gln Ser
435 440 445
Leu Glu Glu Gln Lys Lys Leu Glu Gly Glu Leu Thr Glu Glu Val Glu
450 455 460
Met Ala Lys Arg Arg Ile Asp Glu Ile Asn Lys Glu Leu Asn Gln Val
465 470 475 480
Met Glu Gln Leu Gly Asp Ala Arg Ile Asp Arg Gln Glu Ser Ser Arg
485 490 495
Gln Gln Arg Lys Ala Glu Ile Met Glu Ser Ile Lys Arg Leu Tyr Pro
500 505 510
Gly Ser Val Tyr Gly Arg Leu Ile Asp Leu Cys Gln Pro Thr Gln Lys
515 520 525
Lys Tyr Gln Ile Ala Val Thr Lys Val Leu Gly Lys Asn Met Asp Ala
530 535 540
Ile Ile Val Asp Ser Glu Lys Thr Gly Arg Asp Cys Ile Gln Tyr Ile
545 550 555 560
Lys Glu Gln Arg Gly Glu Pro Glu Thr Phe Leu Pro Leu Asp Tyr Leu
565 570 575
Glu Val Lys Pro Thr Asp Glu Lys Leu Arg Glu Leu Lys Gly Ala Lys
580 585 590
Leu Val Ile Asp Val Ile Arg Tyr Glu Pro Pro His Ile Lys Lys Ala
595 600 605
Leu Gln Tyr Ala Cys Gly Asn Ala Leu Val Cys Asp Asn Val Glu Asp
610 615 620
Ala Arg Arg Ile Ala Phe Gly Gly His Gln Arg His Lys Thr Val Ala
625 630 635 640
Leu Asp Gly Thr Leu Phe Gln Lys Ser Gly Val Ile Ser Gly Gly Ala
645 650 655
Ser Asp Leu Lys Ala Lys Ala Arg Arg Trp Asp Glu Lys Ala Val Asp
660 665 670
Lys Leu Lys Glu Lys Lys Glu Arg Leu Thr Glu Glu Leu Lys Glu Gln
675 680 685
Met Lys Ala Lys Arg Lys Glu Ala Glu Leu Arg Gln Val Gln Ser Gln
690 695 700
Ala His Gly Leu Gln Met Arg Leu Lys Tyr Ser Gln Ser Asp Leu Glu
705 710 715 720
Gln Thr Lys Thr Arg His Leu Ala Leu Asn Leu Gln Glu Lys Ser Lys
725 730 735
Leu Glu Ser Glu Leu Ala Asn Phe Gly Pro Arg Ile Asn Asp Ile Lys
740 745 750
Arg Ile Ile Gln Ser Arg Glu Arg Glu Met Lys Asp Leu Lys Glu Lys
755 760 765
Met Asn Gln Val Glu Asp Glu Val Phe Glu Glu Phe Cys Arg Glu Ile
770 775 780
Gly Val Arg Asn Ile Arg Glu Phe Glu Glu Glu Lys Val Lys Arg Gln
785 790 795 800
Asn Glu Ile Ala Lys Lys Arg Leu Glu Phe Glu Asn Gln Lys Thr Arg
805 810 815
Leu Gly Ile Gln Leu Asp Phe Glu Lys Asn Gln Leu Lys Glu Asp Gln
820 825 830
Asp Lys Val His Met Trp Glu Gln Thr Val Lys Lys Asp Glu Asn Glu
835 840 845

```
Ile Glu Lys Leu Lys Lys Glu Glu Gln Arg His Met Lys Ile Ile Asp
    850                 855                 860
Glu Thr Met Ala Gln Leu Gln Asp Leu Lys Asn Gln His Leu Ala Lys
865                 870                 875                 880
Lys Ser Glu Val Asn Asp Lys Asn His Glu Met Glu Glu Ile Arg Lys
                885                 890                 895
Lys Leu Gly Gly Ala Asn Lys Glu Met Thr His Leu Gln Lys Glu Val
            900                 905                 910
Thr Ala Ile Glu Thr Lys Leu Glu Gln Lys Arg Ser Asp Arg His Asn
        915                 920                 925
Leu Leu Gln Ala Cys Lys Met Gln Asp Ile Lys Leu Pro Leu Ser Lys
    930                 935                 940
Gly Thr Met Asp Asp Ile Ser Gln Glu Glu Gly Ser Ser Gln Gly Glu
945                 950                 955                 960
Asp Ser Val Ser Gly Ser Gln Arg Ile Ser Ser Ile Tyr Ala Arg Glu
                965                 970                 975
Ala Leu Ile Glu Ile Asp Tyr Gly Asp Leu Cys Glu Asp Leu Lys Asp
            980                 985                 990
Ala Gln Ala Glu Glu Glu Ile Lys  Gln Glu Met Asn Thr  Leu Gln Gln
        995                 1000                1005
Lys Leu  Asn Glu Gln Gln Ser  Val Leu Gln Arg Ile  Ala Ala Pro
    1010                1015                1020
Asn Met  Lys Ala Met Glu Lys  Leu Glu Ser Val Arg  Asp Lys Phe
    1025                1030                1035
Gln Glu  Thr Ser Asp Glu Phe  Glu Ala Ala Arg Lys  Arg Ala Lys
    1040                1045                1050
Lys Ala  Lys Gln Ala Phe Glu  Gln Ile Lys Lys Glu  Arg Phe Asp
    1055                1060                1065
Arg Phe  Asn Ala Cys Phe Glu  Ser Val Ala Thr Asn  Ile Asp Glu
    1070                1075                1080
Ile Tyr  Lys Ala Leu Ser Arg  Asn Ser Ser Ala Gln  Ala Phe Leu
    1085                1090                1095
Gly Pro  Glu Asn Pro Glu Glu  Pro Tyr Leu Asp Gly  Ile Asn Tyr
    1100                1105                1110
Asn Cys  Val Ala Pro Gly Lys  Arg Phe Arg Pro Met  Asp Asn Leu
    1115                1120                1125
Ser Gly  Gly Glu Lys Thr Val  Ala Ala Leu Ala Leu  Leu Phe Ala
    1130                1135                1140
Ile His  Ser Tyr Lys Pro Ala  Pro Phe Phe Val Leu  Asp Glu Ile
    1145                1150                1155
Asp Ala  Ala Leu Asp Asn Thr  Asn Ile Gly Lys Val  Ala Asn Tyr
    1160                1165                1170
Ile Lys  Glu Gln Ser Thr Cys  Asn Phe Gln Ala Ile  Val Ile Ser
    1175                1180                1185
Leu Lys  Glu Glu Phe Tyr Thr  Lys Ala Glu Ser Leu  Ile Gly Val
    1190                1195                1200
Tyr Pro  Glu Gln Gly Asp Cys  Val Ile Ser Lys Val  Leu Thr Phe
    1205                1210                1215
Asp Leu  Thr Lys Tyr Pro Asp  Ala Asn Pro Asn Pro  Asn Glu Gln
    1220                1225                1230
```

<210> 175
<211> 501
<212> PRT
<213> Homo sapiens
<400> 175

```
Met Asn Arg Ser Arg Gln Val Thr Cys Val Ala Trp Val Arg Cys Gly
1               5                  10                  15
Val Ala Lys Glu Thr Pro Asp Lys Val Glu Leu Ser Lys Glu Glu Val
            20                  25                  30
Lys Arg Leu Ile Ala Glu Ala Lys Glu Lys Leu Gln Glu Glu Gly Gly
        35                  40                  45
Gly Ser Asp Glu Glu Glu Thr Gly Ser Pro Ser Glu Asp Gly Met Gln
    50                  55                  60
Ser Ala Arg Thr Gln Ala Arg Pro Arg Glu Pro Leu Glu Asp Gly Asp
65                  70                  75                  80
Pro Glu Asp Asp Arg Thr Leu Asp Asp Asp Glu Leu Ala Glu Tyr Asp
                85                  90                  95
Leu Asp Lys Tyr Asp Glu Glu Gly Asp Pro Asp Ala Glu Thr Leu Gly
```

```
                100                 105                 110
Glu Ser Leu Leu Gly Leu Thr Val Tyr Gly Ser Asn Asp Gln Asp Pro
            115                 120                 125
Tyr Val Thr Leu Lys Asp Thr Glu Gln Tyr Glu Arg Glu Asp Phe Leu
    130                 135                 140
Ile Lys Pro Ser Asp Asn Leu Ile Val Cys Gly Arg Ala Glu Gln Asp
145                 150                 155                 160
Gln Cys Asn Leu Glu Val His Val Tyr Asn Gln Glu Glu Asp Ser Phe
                165                 170                 175
Tyr Val His His Asp Ile Leu Leu Ser Ala Tyr Pro Leu Ser Val Glu
            180                 185                 190
Trp Leu Asn Phe Asp Pro Ser Pro Asp Asp Ser Thr Gly Asn Tyr Ile
        195                 200                 205
Ala Val Gly Asn Met Thr Pro Val Ile Glu Val Trp Asp Leu Asp Ile
    210                 215                 220
Val Asp Ser Leu Glu Pro Val Phe Thr Leu Gly Ser Lys Leu Ser Lys
225                 230                 235                 240
Lys Lys Lys Lys Lys Gly Lys Lys Ser Ser Ser Ala Glu Gly His Thr
                245                 250                 255
Asp Ala Val Leu Asp Leu Ser Trp Asn Lys Leu Ile Arg Asn Val Leu
            260                 265                 270
Ala Ser Ala Ser Ala Asp Asn Thr Val Ile Leu Trp Asp Met Ser Leu
        275                 280                 285
Gly Lys Pro Ala Ala Ser Leu Ala Val His Thr Asp Lys Val Gln Thr
    290                 295                 300
Leu Gln Phe His Pro Phe Glu Ala Gln Thr Leu Ile Ser Gly Ser Tyr
305                 310                 315                 320
Asp Lys Ser Val Ala Leu Tyr Asp Cys Arg Ser Pro Asp Glu Ser His
                325                 330                 335
Arg Met Trp Arg Phe Ser Gly Gln Ile Glu Arg Val Thr Trp Asn His
            340                 345                 350
Phe Ser Pro Cys His Phe Leu Ala Ser Thr Asp Asp Gly Phe Val Tyr
        355                 360                 365
Asn Leu Asp Ala Arg Ser Asp Lys Pro Ile Phe Thr Leu Asn Ala His
    370                 375                 380
Asn Asp Glu Ile Ser Gly Leu Asp Leu Ser Ser Gln Ile Lys Gly Cys
385                 390                 395                 400
Leu Val Thr Ala Ser Ala Asp Lys Tyr Val Lys Ile Trp Asp Ile Leu
                405                 410                 415
Gly Asp Arg Pro Ser Leu Val His Ser Arg Asp Met Lys Met Gly Val
            420                 425                 430
Leu Phe Cys Ser Ser Cys Cys Pro Asp Leu Pro Phe Ile Tyr Ala Phe
        435                 440                 445
Gly Gly Gln Lys Glu Gly Leu Arg Val Trp Asp Ile Ser Thr Val Ser
    450                 455                 460
Ser Val Asn Glu Ala Phe Gly Arg Arg Glu Arg Leu Val Leu Gly Ser
465                 470                 475                 480
Ala Arg Asn Ser Ser Ile Ser Gly Pro Phe Gly Ser Arg Ser Ser Asp
                485                 490                 495
Thr Pro Met Glu Ser
            500
```

<210> 176
<211> 488
<212> PRT
<213> Homo sapiens
<400> 176

```
Met Ala Tyr Ser Gln Gly Gly Gly Lys Lys Lys Val Cys Tyr Tyr Tyr
1               5                   10                  15
Asp Gly Asp Ile Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys
            20                  25                  30
Pro His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu
        35                  40                  45
Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu
    50                  55                  60
Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile
65                  70                  75                  80
Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met His Ile Phe Asn
                85                  90                  95
```

Val Gly Glu Asp Cys Pro Ala Phe Asp Gly Leu Phe Glu Phe Cys Gln
100 105 110
Leu Ser Thr Gly Gly Ser Val Ala Gly Ala Val Lys Leu Asn Arg Gln
115 120 125
Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys
130 135 140
Lys Tyr Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala
145 150 155 160
Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile
165 170 175
Asp Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp
180 185 190
Arg Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly
195 200 205
Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala
210 215 220
Val Asn Phe Pro Met Cys Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln
225 230 235 240
Ile Phe Lys Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln Pro Ser
245 250 255
Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu
260 265 270
Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val
275 280 285
Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Gly Tyr
290 295 300
Thr Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala
305 310 315 320
Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu
325 330 335
Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr
340 345 350
Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe
355 360 365
Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala
370 375 380
Ile Pro Glu Asp Ala Val His Glu Asp Ser Gly Asp Glu Asp Gly Glu
385 390 395 400
Asp Pro Asp Lys Arg Ile Ser Ile Arg Ala Ser Asp Lys Arg Ile Ala
405 410 415
Cys Asp Glu Glu Phe Ser Asp Ser Glu Asp Glu Gly Glu Gly Gly Arg
420 425 430
Arg Asn Val Ala Asp His Lys Lys Gly Ala Lys Lys Ala Arg Ile Glu
435 440 445
Glu Asp Lys Lys Glu Thr Glu Asp Lys Lys Thr Asp Val Lys Glu Glu
450 455 460
Asp Lys Ser Lys Asp Asn Ser Gly Glu Lys Thr Asp Thr Lys Gly Thr
465 470 475 480
Lys Ser Glu Gln Leu Ser Asn Pro
485

<210> 177
<211> 270
<212> PRT
<213> Homo sapiens
<400> 177
Met Gly Asn Thr Ser Ser Glu Arg Ala Ala Leu Glu Arg His Gly Gly
1 5 10 15
His Lys Thr Pro Arg Arg Asp Ser Ser Gly Gly Thr Lys Asp Gly Asp
20 25 30
Arg Pro Lys Ile Leu Met Asp Ser Pro Glu Asp Ala Asp Leu Phe His
35 40 45
Ser Glu Glu Ile Lys Ala Pro Glu Lys Glu Glu Phe Leu Ala Trp Gln
50 55 60
His Asp Leu Glu Val Asn Asp Lys Ala Pro Ala Gln Ala Arg Pro Thr
65 70 75 80
Val Phe Arg Trp Thr Gly Gly Gly Lys Glu Val Tyr Leu Ser Gly Ser
85 90 95
Phe Asn Asn Trp Ser Lys Leu Pro Leu Thr Arg Ser His Asn Asn Phe

```
                100                 105                 110
Val Ala Ile Leu Asp Leu Pro Glu Gly Glu His Gln Tyr Lys Phe Phe
            115                 120                 125
Val Asp Gly Gln Trp Thr His Asp Pro Ser Glu Pro Ile Val Thr Ser
        130                 135                 140
Gln Leu Gly Thr Val Asn Asn Ile Ile Gln Val Lys Lys Thr Asp Phe
145                 150                 155                 160
Glu Val Phe Asp Ala Leu Met Val Asp Ser Gln Lys Cys Ser Asp Val
                165                 170                 175
Ser Glu Leu Ser Ser Ser Pro Pro Gly Pro Tyr His Gln Glu Pro Tyr
            180                 185                 190
Val Cys Lys Pro Glu Glu Arg Phe Arg Ala Pro Pro Ile Leu Pro Pro
        195                 200                 205
His Leu Leu Gln Val Ile Leu Asn Lys Asp Thr Gly Ile Ser Cys Asp
    210                 215                 220
Pro Ala Leu Leu Pro Glu Pro Asn His Val Met Leu Asn His Leu Tyr
225                 230                 235                 240
Ala Leu Ser Ile Lys Asp Gly Val Met Val Leu Ser Ala Thr His Arg
                245                 250                 255
Tyr Lys Lys Lys Tyr Val Thr Thr Leu Leu Tyr Lys Pro Ile
            260                 265                 270
```

<210> 178
<211> 514
<212> PRT
<213> Homo sapiens
<400> 178

```
Met Ala Asp Tyr Leu Ile Ser Gly Gly Thr Ser Tyr Val Pro Asp Asp
1                 5                  10                  15
Gly Leu Thr Ala Gln Gln Leu Phe Asn Cys Gly Asp Gly Leu Thr Tyr
            20                  25                  30
Asn Asp Phe Leu Ile Leu Pro Gly Tyr Ile Asp Phe Thr Ala Asp Gln
        35                  40                  45
Val Asp Leu Thr Ser Ala Leu Thr Lys Lys Ile Thr Leu Lys Thr Pro
    50                  55                  60
Leu Val Ser Ser Pro Met Asp Thr Val Thr Glu Ala Gly Met Ala Ile
65                  70                  75                  80
Ala Met Ala Leu Thr Gly Gly Ile Gly Phe Ile His His Asn Cys Thr
                85                  90                  95
Pro Glu Phe Gln Ala Asn Glu Val Arg Lys Val Lys Lys Tyr Glu Gln
            100                 105                 110
Gly Phe Ile Thr Asp Pro Val Val Leu Ser Pro Lys Asp Arg Val Arg
        115                 120                 125
Asp Val Phe Glu Ala Lys Ala Arg His Gly Phe Cys Gly Ile Pro Ile
    130                 135                 140
Thr Asp Thr Gly Arg Met Gly Ser Arg Leu Val Gly Ile Ile Ser Ser
145                 150                 155                 160
Arg Asp Ile Asp Phe Leu Lys Glu Glu Glu His Asp Cys Phe Leu Glu
                165                 170                 175
Glu Ile Met Thr Lys Arg Glu Asp Leu Val Val Ala Pro Arg Ser Ile
            180                 185                 190
Thr Leu Lys Glu Ala Asn Glu Ile Leu Gln Arg Ser Lys Lys Gly Lys
        195                 200                 205
Leu Pro Ile Val Asn Glu Asp Asp Glu Leu Val Ala Ile Ile Ala Arg
    210                 215                 220
Thr Asp Leu Lys Lys Asn Arg Asp Tyr Pro Leu Ala Ser Lys Asp Ala
225                 230                 235                 240
Lys Lys Gln Leu Leu Cys Gly Ala Ala Ile Gly Thr His Glu Asp Asp
                245                 250                 255
Lys Tyr Arg Leu Asp Leu Leu Ala Gln Ala Gly Val Asp Val Val Val
            260                 265                 270
Leu Asp Ser Ser Gln Gly Asn Ser Ile Phe Gln Ile Asn Met Ile Lys
        275                 280                 285
Tyr Ile Lys Asp Lys Tyr Pro Asn Leu Gln Val Ile Gly Gly Asn Val
    290                 295                 300
Val Thr Ala Ala Gln Ala Lys Asn Leu Ile Asp Ala Gly Val Asp Ala
305                 310                 315                 320
Leu Arg Val Gly Met Gly Ser Gly Ser Ile Cys Ile Thr Gln Glu Val
                325                 330                 335
```

```
Leu Ala Cys Gly Arg Pro Gln Ala Thr Ala Val Tyr Lys Val Ser Glu
            340                 345                 350
Tyr Ala Arg Arg Phe Gly Val Pro Val Ile Ala Asp Gly Gly Ile Gln
        355                 360                 365
Asn Val Gly His Ile Ala Lys Ala Leu Ala Leu Gly Ala Ser Thr Val
    370                 375                 380
Met Met Gly Ser Leu Leu Ala Ala Thr Thr Glu Ala Pro Gly Glu Tyr
385                 390                 395                 400
Phe Phe Ser Asp Gly Ile Arg Leu Lys Lys Tyr Arg Gly Met Gly Ser
                405                 410                 415
Leu Asp Ala Met Asp Lys His Leu Ser Ser Gln Asn Arg Tyr Phe Ser
            420                 425                 430
Glu Ala Asp Lys Ile Lys Val Ala Gln Gly Val Ser Gly Ala Val Gln
        435                 440                 445
Asp Lys Gly Ser Ile His Lys Phe Val Pro Tyr Leu Ile Ala Gly Ile
    450                 455                 460
Gln His Ser Cys Gln Asp Ile Gly Ala Lys Ser Leu Thr Gln Val Arg
465                 470                 475                 480
Ala Met Met Tyr Ser Gly Glu Leu Lys Phe Glu Lys Arg Thr Ser Ser
                485                 490                 495
Ala Gln Val Glu Gly Gly Val His Ser Leu His Ser Tyr Glu Lys Arg
            500                 505                 510
Leu Phe
```

<210> 179
<211> 152
<212> PRT
<213> Homo sapiens
<400> 179

```
Met Ser Thr Pro Ala Arg Arg Arg Leu Met Arg Asp Phe Lys Arg Leu
1               5                   10                  15
Gln Glu Asp Pro Pro Ala Gly Val Ser Gly Ala Pro Ser Glu Asn Asn
            20                  25                  30
Ile Met Val Trp Asn Ala Val Ile Phe Gly Pro Glu Gly Thr Pro Phe
        35                  40                  45
Glu Asp Gly Thr Phe Lys Leu Thr Ile Glu Phe Thr Glu Glu Tyr Pro
    50                  55                  60
Asn Lys Pro Pro Thr Val Arg Phe Val Ser Lys Met Phe His Pro Asn
65                  70                  75                  80
Val Tyr Ala Asp Gly Ser Ile Cys Leu Asp Ile Leu Gln Asn Arg Trp
                85                  90                  95
Ser Pro Thr Tyr Asp Val Ser Ser Ile Leu Thr Ser Ile Gln Ser Leu
            100                 105                 110
Leu Asp Glu Pro Asn Pro Asn Ser Pro Ala Asn Ser Gln Ala Ala Gln
        115                 120                 125
Leu Tyr Gln Glu Asn Lys Arg Glu Tyr Glu Lys Arg Val Ser Ala Ile
    130                 135                 140
Val Glu Gln Ser Trp Arg Asp Cys
145                 150
```

<210> 180
<211> 260
<212> PRT
<213> Homo sapiens
<400> 180

```
Met Pro Gln Asn Glu Tyr Ile Glu Leu His Arg Lys Arg Tyr Gly Tyr
1               5                   10                  15
Arg Leu Asp Tyr His Glu Lys Lys Arg Lys Lys Glu Ser Arg Glu Ala
            20                  25                  30
His Glu Arg Ser Lys Lys Ala Lys Lys Met Ile Gly Leu Lys Ala Lys
        35                  40                  45
Leu Tyr His Lys Gln Arg His Ala Glu Lys Ile Gln Met Lys Lys Thr
    50                  55                  60
Ile Lys Met His Glu Lys Arg Asn Thr Lys Gln Lys Asn Asp Glu Lys
65                  70                  75                  80
Thr Pro Gln Gly Ala Val Pro Ala Tyr Leu Leu Asp Arg Glu Gly Gln
                85                  90                  95
Ser Arg Ala Lys Val Leu Ser Asn Met Ile Lys Gln Lys Arg Lys Glu
```

```
                100                 105                 110
Lys Ala Gly Lys Trp Glu Val Pro Leu Pro Lys Val Arg Ala Gln Gly
            115                 120                 125
Glu Thr Glu Val Leu Lys Val Ile Arg Thr Gly Lys Arg Lys Lys Lys
        130                 135                 140
Ala Trp Lys Arg Met Val Thr Lys Val Cys Phe Val Gly Asp Gly Phe
145                 150                 155                 160
Thr Arg Lys Pro Pro Lys Tyr Glu Arg Phe Ile Arg Pro Met Gly Leu
                165                 170                 175
Arg Phe Lys Lys Ala His Val Thr His Pro Glu Leu Lys Ala Thr Phe
            180                 185                 190
Cys Leu Pro Ile Leu Gly Val Lys Lys Asn Pro Ser Ser Pro Leu Tyr
        195                 200                 205
Thr Thr Leu Gly Val Ile Thr Lys Gly Thr Val Ile Glu Val Asn Val
    210                 215                 220
Ser Glu Leu Gly Leu Val Thr Gln Gly Gly Lys Val Ile Trp Gly Lys
225                 230                 235                 240
Tyr Ala Gln Val Thr Asn Asn Pro Glu Asn Asp Gly Cys Ile Asn Ala
                245                 250                 255
Val Leu Leu Val
            260
```

<210> 181
<211> 790
<212> PRT
<213> Homo sapiens
<400> 181

```
Met Glu Ala Thr Ser Arg Glu Ala Ala Pro Ala Lys Ser Ser Ala Ser
1                 5                  10                  15
Gly Pro Asn Ala Pro Pro Ala Leu Phe Glu Leu Cys Gly Arg Ala Val
            20                  25                  30
Ser Ala His Met Gly Val Leu Glu Ser Gly Val Trp Ala Leu Pro Gly
        35                  40                  45
Pro Ile Leu Gln Ser Ile Leu Pro Leu Leu Asn Ile Tyr Tyr Leu Glu
    50                  55                  60
Arg Ile Glu Glu Thr Ala Leu Lys Lys Gly Leu Ser Thr Gln Ala Ile
65                  70                  75                  80
Trp Arg Arg Leu Trp Asp Glu Leu Met Lys Thr Arg Pro Ser Ser Leu
                85                  90                  95
Glu Ser Val Thr Cys Trp Arg Ala Lys Phe Met Glu Ala Phe Phe Ser
            100                 105                 110
His Val Leu Arg Gly Thr Ile Asp Val Ser Ser Asp Arg Arg Leu Cys
        115                 120                 125
Asp Gln Arg Phe Ser Pro Leu Leu His Ser Ser Arg His Val Arg Gln
    130                 135                 140
Leu Thr Ile Cys Asn Met Leu Gln Gly Ala Thr Glu Leu Val Ala Glu
145                 150                 155                 160
Pro Asn Arg Arg Val Leu Glu Thr Leu Ala Ser Ser Leu His Thr Leu
                165                 170                 175
Lys Phe Arg His Leu Leu Phe Ser Asp Val Ala Ala Gln Gln Ser Leu
            180                 185                 190
Arg Gln Leu Leu His Gln Leu Ile His His Gly Ala Val Ser Gln Val
        195                 200                 205
Ser Leu Tyr Ser Trp Pro Val Pro Glu Ser Ala Leu Phe Ile Leu Ile
    210                 215                 220
Leu Thr Met Ser Ala Gly Phe Trp Gln Pro Gly Pro Gly Gly Pro Pro
225                 230                 235                 240
Cys Arg Leu Cys Gly Glu Ala Ser Arg Gly Arg Ala Pro Ser Arg Asp
                245                 250                 255
Glu Gly Ser Leu Leu Leu Gly Ser Arg Arg Pro Arg Arg Asp Ala Ala
            260                 265                 270
Glu Arg Cys Ala Ala Ala Leu Met Ala Ser Arg Arg Lys Ser Glu Ala
        275                 280                 285
Lys Gln Met Pro Arg Ala Ala Pro Ala Thr Arg Val Thr Arg Arg Ser
    290                 295                 300
Thr Gln Glu Ser Leu Thr Ala Gly Gly Thr Asp Leu Lys Arg Glu Leu
305                 310                 315                 320
His Pro Pro Ala Thr Ser His Glu Ala Pro Gly Thr Lys Arg Ser Pro
                325                 330                 335
```

Ser Ala Pro Ala Ala Thr Ser Ser Ala Ser Ser Ser Thr Ser Ser Tyr
340 345 350
Lys Arg Ala Pro Ala Ser Ser Ala Pro Gln Pro Lys Pro Leu Lys Arg
355 360 365
Phe Lys Arg Ala Ala Gly Lys Lys Gly Ala Arg Thr Arg Gln Gly Pro
370 375 380
Gly Ala Glu Ser Glu Asp Leu Tyr Asp Phe Val Phe Ile Val Ala Gly
385 390 395 400
Glu Lys Glu Asp Gly Glu Glu Met Glu Ile Gly Glu Val Ala Cys Gly
405 410 415
Ala Leu Asp Gly Ser Asp Pro Ser Cys Leu Gly Leu Pro Ala Leu Glu
420 425 430
Ala Ser Gln Arg Phe Arg Ser Ile Ser Thr Leu Glu Leu Phe Thr Val
435 440 445
Pro Leu Ser Thr Glu Ala Ala Leu Thr Leu Cys His Leu Leu Ser Ser
450 455 460
Trp Val Ser Leu Glu Ser Leu Thr Leu Ser Tyr Asn Gly Leu Gly Ser
465 470 475 480
Asn Ile Phe Arg Leu Leu Asp Ser Leu Arg Ala Leu Ser Gly Gln Ala
485 490 495
Gly Cys Arg Leu Arg Ala Leu His Leu Ser Asp Leu Phe Ser Pro Leu
500 505 510
Pro Ile Leu Glu Leu Thr Arg Ala Ile Val Arg Ala Leu Pro Leu Leu
515 520 525
Arg Val Leu Ser Ile Arg Val Asp His Pro Ser Gln Arg Asp Asn Pro
530 535 540
Gly Val Pro Gly Asn Ala Gly Pro Pro Ser His Ile Ile Gly Asp Glu
545 550 555 560
Glu Ile Pro Glu Asn Cys Leu Glu Gln Leu Glu Met Gly Phe Pro Arg
565 570 575
Gly Ala Gln Pro Ala Pro Leu Leu Cys Ser Val Leu Lys Ala Ser Gly
580 585 590
Ser Leu Gln Gln Leu Ser Leu Asp Ser Ala Thr Phe Ala Ser Pro Gln
595 600 605
Asp Phe Gly Leu Val Leu Gln Thr Leu Lys Glu Tyr Asn Leu Ala Leu
610 615 620
Lys Arg Leu Ser Phe His Asp Met Asn Leu Ala Asp Cys Gln Ser Glu
625 630 635 640
Val Leu Phe Leu Leu Gln Asn Leu Thr Leu Gln Glu Ile Thr Phe Ser
645 650 655
Phe Cys Arg Leu Phe Glu Lys Arg Pro Ala Gln Phe Leu Pro Glu Met
660 665 670
Val Ala Ala Met Lys Gly Asn Ser Thr Leu Lys Gly Leu Arg Leu Pro
675 680 685
Gly Asn Arg Leu Gly Asn Ala Gly Leu Leu Ala Leu Ala Asp Val Phe
690 695 700
Ser Glu Asp Ser Ser Ser Ser Leu Cys Gln Leu Asp Ile Ser Ser Asn
705 710 715 720
Cys Ile Lys Pro Asp Gly Leu Leu Glu Phe Ala Lys Arg Leu Glu Arg
725 730 735
Trp Gly Arg Gly Ala Phe Gly His Leu Arg Leu Phe Gln Asn Trp Leu
740 745 750
Asp Gln Asp Ala Val Thr Ala Arg Glu Ala Ile Arg Arg Leu Arg Ala
755 760 765
Thr Cys His Val Val Ser Asp Ser Trp Asp Ser Ser Gln Ala Phe Ala
770 775 780
Asp Tyr Val Ser Thr Met
785 790

<210> 182
<211> 2058
<212> PRT
<213> Homo sapiens
<400> 182
Met Asp Asn Phe Phe Thr Glu Gly Thr Arg Val Trp Leu Arg Glu Asn
1 5 10 15
Gly Gln His Phe Pro Ser Thr Val Asn Ser Cys Ala Glu Gly Ile Val
20 25 30
Val Phe Arg Thr Asp Tyr Gly Gln Val Phe Thr Tyr Lys Gln Ser Thr

```
        35                  40                  45
Ile Thr His Gln Lys Val Thr Ala Met His Pro Thr Asn Glu Glu Gly
    50                  55                  60
Val Asp Asp Met Ala Ser Leu Thr Glu Leu His Gly Gly Ser Ile Met
65                  70                  75                  80
Tyr Asn Leu Phe Gln Arg Tyr Lys Arg Asn Gln Ile Tyr Thr Tyr Ile
                85                  90                  95
Gly Ser Ile Leu Ala Ser Val Asn Pro Tyr Gln Pro Ile Ala Gly Leu
            100                 105                 110
Tyr Glu Pro Ala Thr Met Glu Gln Tyr Ser Arg Arg His Leu Gly Glu
        115                 120                 125
Leu Pro Pro His Ile Phe Ala Ile Ala Asn Glu Cys Tyr Arg Cys Leu
    130                 135                 140
Trp Lys Arg Tyr Asp Asn Gln Cys Ile Leu Ile Ser Gly Glu Ser Gly
145                 150                 155                 160
Ala Gly Lys Thr Glu Ser Thr Lys Leu Ile Leu Lys Phe Leu Ser Val
                165                 170                 175
Ile Ser Gln Gln Ser Leu Glu Leu Ser Leu Lys Glu Lys Thr Ser Cys
            180                 185                 190
Val Glu Arg Ala Ile Leu Glu Ser Ser Pro Ile Met Glu Ala Phe Gly
        195                 200                 205
Asn Ala Lys Thr Val Tyr Asn Asn Asn Ser Ser Arg Phe Gly Lys Phe
    210                 215                 220
Val Gln Leu Asn Ile Cys Gln Lys Gly Asn Ile Gln Gly Gly Arg Ile
225                 230                 235                 240
Val Asp Tyr Leu Leu Glu Lys Asn Arg Val Val Arg Gln Asn Pro Gly
                245                 250                 255
Glu Arg Asn Tyr His Ile Phe Tyr Ala Leu Leu Ala Gly Leu Glu His
            260                 265                 270
Glu Glu Arg Glu Glu Phe Tyr Leu Ser Thr Pro Glu Asn Tyr His Tyr
        275                 280                 285
Leu Asn Gln Ser Gly Cys Val Glu Asp Lys Thr Ile Ser Asp Gln Glu
    290                 295                 300
Ser Phe Arg Glu Val Ile Thr Ala Met Asp Val Met Gln Phe Ser Lys
305                 310                 315                 320
Glu Glu Val Arg Glu Val Ser Arg Leu Leu Ala Gly Ile Leu His Leu
                325                 330                 335
Gly Asn Ile Glu Phe Ile Thr Ala Gly Gly Ala Gln Val Ser Phe Lys
            340                 345                 350
Thr Ala Leu Gly Arg Ser Ala Glu Leu Leu Gly Leu Asp Pro Thr Gln
        355                 360                 365
Leu Thr Asp Ala Leu Thr Gln Arg Ser Met Phe Leu Arg Gly Glu Glu
    370                 375                 380
Ile Leu Thr Pro Leu Asn Val Gln Gln Ala Val Asp Ser Arg Asp Ser
385                 390                 395                 400
Leu Ala Met Ala Leu Tyr Ala Cys Cys Phe Glu Trp Val Ile Lys Lys
                405                 410                 415
Ile Asn Ser Arg Ile Lys Gly Asn Glu Asp Phe Lys Ser Ile Gly Ile
            420                 425                 430
Leu Asp Ile Phe Gly Phe Glu Asn Phe Glu Val Asn His Phe Glu Gln
        435                 440                 445
Phe Asn Ile Asn Tyr Ala Asn Glu Lys Leu Gln Glu Tyr Phe Asn Lys
    450                 455                 460
His Ile Phe Ser Leu Glu Gln Leu Glu Tyr Ser Arg Glu Gly Leu Val
465                 470                 475                 480
Trp Glu Asp Ile Asp Trp Ile Asp Asn Gly Glu Cys Leu Asp Leu Ile
                485                 490                 495
Glu Lys Lys Leu Gly Leu Leu Ala Leu Ile Asn Glu Glu Ser His Phe
            500                 505                 510
Pro Gln Ala Thr Asp Ser Thr Leu Leu Glu Lys Leu His Ser Gln His
        515                 520                 525
Ala Asn Asn His Phe Tyr Val Lys Pro Arg Val Ala Val Asn Asn Phe
    530                 535                 540
Gly Val Lys His Tyr Ala Gly Glu Val Gln Tyr Asp Val Arg Gly Ile
545                 550                 555                 560
Leu Glu Lys Asn Arg Asp Thr Phe Arg Asp Asp Leu Leu Asn Leu Leu
                565                 570                 575
Arg Glu Ser Arg Phe Asp Phe Ile Tyr Asp Leu Phe Glu His Val Ser
            580                 585                 590
```

Ser Arg Asn Asn Gln Asp Thr Leu Lys Cys Gly Ser Lys His Arg Arg
595 600 605
Pro Thr Val Ser Ser Gln Phe Lys Asp Ser Leu His Ser Leu Met Ala
610 615 620
Thr Leu Ser Ser Ser Asn Pro Phe Phe Val Arg Cys Ile Lys Pro Asn
625 630 635 640
Met Gln Lys Met Pro Asp Gln Phe Asp Gln Ala Val Val Leu Asn Gln
645 650 655
Leu Arg Tyr Ser Gly Met Leu Glu Thr Val Arg Ile Arg Lys Ala Gly
660 665 670
Tyr Ala Val Arg Arg Pro Phe Gln Asp Phe Tyr Lys Arg Tyr Lys Val
675 680 685
Leu Met Arg Asn Leu Ala Leu Pro Glu Asp Val Arg Gly Lys Cys Thr
690 695 700
Ser Leu Leu Gln Leu Tyr Asp Ala Ser Asn Ser Glu Trp Gln Leu Gly
705 710 715 720
Lys Thr Lys Val Phe Leu Arg Glu Ser Leu Glu Gln Lys Leu Glu Lys
725 730 735
Arg Arg Glu Glu Glu Val Ser His Ala Ala Met Val Ile Arg Ala His
740 745 750
Val Leu Gly Phe Leu Ala Arg Lys Gln Tyr Arg Lys Val Leu Tyr Cys
755 760 765
Val Val Ile Ile Gln Lys Asn Tyr Arg Ala Phe Leu Leu Arg Arg Arg
770 775 780
Phe Leu His Leu Lys Lys Ala Ala Ile Val Phe Gln Lys Gln Leu Arg
785 790 795 800
Gly Gln Ile Ala Arg Arg Val Tyr Arg Gln Leu Leu Ala Glu Lys Arg
805 810 815
Glu Gln Glu Glu Lys Lys Lys Gln Glu Glu Glu Glu Lys Lys Lys Arg
820 825 830
Glu Glu Glu Glu Arg Glu Arg Glu Arg Glu Arg Arg Glu Ala Glu Leu
835 840 845
Arg Ala Gln Gln Glu Glu Glu Thr Arg Lys Gln Gln Glu Leu Glu Ala
850 855 860
Leu Gln Lys Ser Gln Lys Glu Ala Glu Leu Thr Arg Glu Leu Glu Lys
865 870 875 880
Gln Lys Glu Asn Lys Gln Val Glu Glu Ile Leu Arg Leu Glu Lys Glu
885 890 895
Ile Glu Asp Leu Gln Arg Met Lys Glu Gln Gln Glu Leu Ser Leu Thr
900 905 910
Glu Ala Ser Leu Gln Lys Leu Gln Glu Arg Arg Asp Gln Glu Leu Arg
915 920 925
Arg Leu Glu Glu Glu Ala Cys Arg Ala Ala Gln Glu Phe Leu Glu Ser
930 935 940
Leu Asn Phe Asp Glu Ile Asp Glu Cys Val Arg Asn Ile Glu Arg Ser
945 950 955 960
Leu Ser Val Gly Ser Glu Phe Ser Ser Glu Leu Ala Glu Ser Ala Cys
965 970 975
Glu Glu Lys Pro Asn Phe Asn Phe Ser Gln Pro Tyr Pro Glu Glu Glu
980 985 990
Val Asp Glu Gly Phe Glu Ala Asp Asp Asp Ala Phe Lys Asp Ser Pro
995 1000 1005
Asn Pro Ser Glu His Gly His Ser Asp Gln Arg Thr Ser Gly Ile
1010 1015 1020
Arg Thr Ser Asp Asp Ser Ser Glu Glu Asp Pro Tyr Met Asn Asp
1025 1030 1035
Thr Val Val Pro Thr Ser Pro Ser Ala Asp Ser Thr Val Leu Leu
1040 1045 1050
Ala Pro Ser Val Gln Asp Ser Gly Ser Leu His Asn Ser Ser Ser
1055 1060 1065
Gly Glu Ser Thr Tyr Cys Met Pro Gln Asn Ala Gly Asp Leu Pro
1070 1075 1080
Ser Pro Asp Gly Asp Tyr Asp Tyr Asp Gln Asp Asp Tyr Glu Asp
1085 1090 1095
Gly Ala Ile Thr Ser Gly Ser Ser Val Thr Phe Ser Asn Ser Tyr
1100 1105 1110
Gly Ser Gln Trp Ser Pro Asp Tyr Arg Cys Ser Val Gly Thr Tyr
1115 1120 1125
Asn Ser Ser Gly Ala Tyr Arg Phe Ser Ser Glu Gly Ala Gln Ser

1130 1135 1140
Ser Phe Glu Asp Ser Glu Glu Asp Phe Asp Ser Arg Phe Asp Thr
1145 1150 1155
Asp Asp Glu Leu Ser Tyr Arg Arg Asp Ser Val Tyr Ser Cys Val
1160 1165 1170
Thr Leu Pro Tyr Phe His Ser Phe Leu Tyr Met Lys Gly Gly Leu
1175 1180 1185
Met Asn Ser Trp Lys Arg Arg Trp Cys Val Leu Lys Asp Glu Thr
1190 1195 1200
Phe Leu Trp Phe Arg Ser Lys Gln Glu Ala Leu Lys Gln Gly Trp
1205 1210 1215
Leu His Lys Lys Gly Gly Gly Ser Ser Thr Leu Ser Arg Arg Asn
1220 1225 1230
Trp Lys Lys Arg Trp Phe Val Leu Arg Gln Ser Lys Leu Met Tyr
1235 1240 1245
Phe Glu Asn Asp Ser Glu Glu Lys Leu Lys Gly Thr Val Glu Val
1250 1255 1260
Arg Thr Ala Lys Glu Ile Ile Asp Asn Thr Thr Lys Glu Asn Gly
1265 1270 1275
Ile Asp Ile Ile Met Ala Asp Arg Thr Phe His Leu Ile Ala Glu
1280 1285 1290
Ser Pro Glu Asp Ala Ser Gln Trp Phe Ser Val Leu Ser Gln Val
1295 1300 1305
His Ala Ser Thr Asp Gln Glu Ile Gln Glu Met His Asp Glu Gln
1310 1315 1320
Ala Asn Pro Gln Asn Ala Val Gly Thr Leu Asp Val Gly Leu Ile
1325 1330 1335
Asp Ser Val Cys Ala Ser Asp Ser Pro Asp Arg Pro Asn Ser Phe
1340 1345 1350
Val Ile Ile Thr Ala Asn Arg Val Leu His Cys Asn Ala Asp Thr
1355 1360 1365
Pro Glu Glu Met His His Trp Ile Thr Leu Leu Gln Arg Ser Lys
1370 1375 1380
Gly Asp Thr Arg Val Glu Gly Gln Glu Phe Ile Val Arg Gly Trp
1385 1390 1395
Leu His Lys Glu Val Lys Asn Ser Pro Lys Met Ser Ser Leu Lys
1400 1405 1410
Leu Lys Lys Arg Trp Phe Val Leu Thr His Asn Ser Leu Asp Tyr
1415 1420 1425
Tyr Lys Ser Ser Glu Lys Asn Ala Leu Lys Leu Gly Thr Leu Val
1430 1435 1440
Leu Asn Ser Leu Cys Ser Val Val Pro Pro Asp Glu Lys Ile Phe
1445 1450 1455
Lys Glu Thr Gly Tyr Trp Asn Val Thr Val Tyr Gly Arg Lys His
1460 1465 1470
Cys Tyr Arg Leu Tyr Thr Lys Leu Leu Asn Glu Ala Thr Arg Trp
1475 1480 1485
Ser Ser Ala Ile Gln Asn Val Thr Asp Thr Lys Ala Pro Ile Asp
1490 1495 1500
Thr Pro Thr Gln Gln Leu Ile Gln Asp Ile Lys Glu Asn Cys Leu
1505 1510 1515
Asn Ser Asp Val Val Glu Gln Ile Tyr Lys Arg Asn Pro Ile Leu
1520 1525 1530
Arg Tyr Thr His His Pro Leu His Ser Pro Leu Leu Pro Leu Pro
1535 1540 1545
Tyr Gly Asp Ile Asn Leu Asn Leu Leu Lys Asp Lys Gly Tyr Thr
1550 1555 1560
Thr Leu Gln Asp Glu Ala Ile Lys Ile Phe Asn Ser Leu Gln Gln
1565 1570 1575
Leu Glu Ser Met Ser Asp Pro Ile Pro Ile Ile Gln Gly Ile Leu
1580 1585 1590
Gln Thr Gly His Asp Leu Arg Pro Leu Arg Asp Glu Leu Tyr Cys
1595 1600 1605
Gln Leu Ile Lys Gln Thr Asn Lys Val Pro His Pro Gly Ser Val
1610 1615 1620
Gly Asn Leu Tyr Ser Trp Gln Ile Leu Thr Cys Leu Ser Cys Thr
1625 1630 1635
Phe Leu Pro Ser Arg Gly Ile Leu Lys Tyr Leu Lys Phe His Leu
1640 1645 1650

Lys Arg Ile Arg Glu Gln Phe Pro Gly Thr Glu Met Glu Lys Tyr
1655 1660 1665
Ala Leu Phe Thr Tyr Glu Ser Leu Lys Lys Thr Lys Cys Arg Glu
1670 1675 1680
Phe Val Pro Ser Arg Asp Glu Ile Glu Ala Leu Ile His Arg Gln
1685 1690 1695
Glu Met Thr Ser Thr Val Tyr Cys His Gly Gly Gly Ser Cys Lys
1700 1705 1710
Ile Thr Ile Asn Ser His Thr Thr Ala Gly Glu Val Val Glu Lys
1715 1720 1725
Leu Ile Arg Gly Leu Ala Met Glu Asp Ser Arg Asn Met Phe Ala
1730 1735 1740
Leu Phe Glu Tyr Asn Gly His Val Asp Lys Ala Ile Glu Ser Arg
1745 1750 1755
Thr Val Val Ala Asp Val Leu Ala Lys Phe Glu Lys Leu Ala Ala
1760 1765 1770
Thr Ser Glu Val Gly Asp Leu Pro Trp Lys Phe Tyr Phe Lys Leu
1775 1780 1785
Tyr Cys Phe Leu Asp Thr Asp Asn Val Pro Lys Asp Ser Val Glu
1790 1795 1800
Phe Ala Phe Met Phe Glu Gln Ala His Glu Ala Val Ile His Gly
1805 1810 1815
His His Pro Ala Pro Glu Glu Asn Leu Gln Val Leu Ala Ala Leu
1820 1825 1830
Arg Leu Gln Tyr Leu Gln Gly Asp Tyr Thr Leu His Ala Ala Ile
1835 1840 1845
Pro Pro Leu Glu Glu Val Tyr Ser Leu Gln Arg Leu Lys Ala Arg
1850 1855 1860
Ile Ser Gln Ser Thr Lys Thr Phe Thr Pro Cys Glu Arg Leu Glu
1865 1870 1875
Lys Arg Arg Thr Ser Phe Leu Glu Gly Thr Leu Arg Arg Ser Phe
1880 1885 1890
Arg Thr Gly Ser Val Val Arg Gln Lys Val Glu Glu Glu Gln Met
1895 1900 1905
Leu Asp Met Trp Ile Lys Glu Glu Val Ser Ser Ala Arg Ala Ser
1910 1915 1920
Ile Ile Asp Lys Trp Arg Lys Phe Gln Gly Met Asn Gln Glu Gln
1925 1930 1935
Ala Met Ala Lys Tyr Met Ala Leu Ile Lys Glu Trp Pro Gly Tyr
1940 1945 1950
Gly Ser Thr Leu Phe Asp Val Glu Cys Lys Glu Gly Gly Phe Pro
1955 1960 1965
Gln Glu Leu Trp Leu Gly Val Ser Ala Asp Ala Val Ser Val Tyr
1970 1975 1980
Lys Arg Gly Glu Gly Arg Pro Leu Glu Val Phe Gln Tyr Glu His
1985 1990 1995
Ile Leu Ser Phe Gly Ala Pro Leu Ala Asn Thr Tyr Lys Ile Val
2000 2005 2010
Val Asp Glu Arg Glu Leu Leu Phe Glu Thr Ser Glu Val Val Asp
2015 2020 2025
Val Ala Lys Leu Met Lys Ala Tyr Ile Ser Met Ile Val Lys Lys
2030 2035 2040
Arg Tyr Ser Thr Thr Arg Ser Ala Ser Ser Gln Gly Ser Ser Arg
2045 2050 2055

<210> 183
<211> 1210
<212> PRT
<213> Homo sapiens
<400> 183
Met Arg Pro Ser Gly Thr Ala Gly Ala Ala Leu Leu Ala Leu Leu Ala
1 5 10 15
Ala Leu Cys Pro Ala Ser Arg Ala Leu Glu Glu Lys Lys Val Cys Gln
20 25 30
Gly Thr Ser Asn Lys Leu Thr Gln Leu Gly Thr Phe Glu Asp His Phe
35 40 45
Leu Ser Leu Gln Arg Met Phe Asn Asn Cys Glu Val Val Leu Gly Asn
50 55 60
Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp Leu Ser Phe Leu Lys

65 70 75 80
Thr Ile Gln Glu Val Ala Gly Tyr Val Leu Ile Ala Leu Asn Thr Val
85 90 95
Glu Arg Ile Pro Leu Glu Asn Leu Gln Ile Ile Arg Gly Asn Met Tyr
100 105 110
Tyr Glu Asn Ser Tyr Ala Leu Ala Val Leu Ser Asn Tyr Asp Ala Asn
115 120 125
Lys Thr Gly Leu Lys Glu Leu Pro Met Arg Asn Leu Gln Glu Ile Leu
130 135 140
His Gly Ala Val Arg Phe Ser Asn Asn Pro Ala Leu Cys Asn Val Glu
145 150 155 160
Ser Ile Gln Trp Arg Asp Ile Val Ser Ser Asp Phe Leu Ser Asn Met
165 170 175
Ser Met Asp Phe Gln Asn His Leu Gly Ser Cys Gln Lys Cys Asp Pro
180 185 190
Ser Cys Pro Asn Gly Ser Cys Trp Gly Ala Gly Glu Glu Asn Cys Gln
195 200 205
Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg
210 215 220
Gly Lys Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys
225 230 235 240
Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg Asp
245 250 255
Glu Ala Thr Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro
260 265 270
Thr Thr Tyr Gln Met Asp Val Asn Pro Glu Gly Lys Tyr Ser Phe Gly
275 280 285
Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His
290 295 300
Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu
305 310 315 320
Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly Pro Cys Arg Lys Val
325 330 335
Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp Ser Leu Ser Ile Asn
340 345 350
Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr Ser Ile Ser Gly Asp
355 360 365
Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp Ser Phe Thr His Thr
370 375 380
Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu Lys Thr Val Lys Glu
385 390 395 400
Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp
405 410 415
Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln
420 425 430
His Gly Gln Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu
435 440 445
Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser
450 455 460
Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu
465 470 475 480
Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly Glu
485 490 495
Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys Ser Pro
500 505 510
Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Arg Asn
515 520 525
Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys Asn Leu Leu Glu Gly
530 535 540
Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro
545 550 555 560
Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro
565 570 575
Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val
580 585 590
Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn Asn Thr Leu Val Trp
595 600 605
Lys Tyr Ala Asp Ala Gly His Val Cys His Leu Cys His Pro Asn Cys
610 615 620

```
Thr Tyr Gly Cys Thr Gly Pro Gly Leu Glu Gly Cys Pro Thr Asn Gly
625                 630                 635                 640
Pro Lys Ile Pro Ser Ile Ala Thr Gly Met Val Gly Ala Leu Leu Leu
                645                 650                 655
Leu Leu Val Val Ala Leu Gly Ile Gly Leu Phe Met Arg Arg Arg His
            660                 665                 670
Ile Val Arg Lys Arg Thr Leu Arg Arg Leu Leu Gln Glu Arg Glu Leu
        675                 680                 685
Val Glu Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn Gln Ala Leu Leu
    690                 695                 700
Arg Ile Leu Lys Glu Thr Glu Phe Lys Lys Ile Lys Val Leu Gly Ser
705                 710                 715                 720
Gly Ala Phe Gly Thr Val Tyr Lys Gly Leu Trp Ile Pro Glu Gly Glu
                725                 730                 735
Lys Val Lys Ile Pro Val Ala Ile Lys Glu Leu Arg Glu Ala Thr Ser
            740                 745                 750
Pro Lys Ala Asn Lys Glu Ile Leu Asp Glu Ala Tyr Val Met Ala Ser
        755                 760                 765
Val Asp Asn Pro His Val Cys Arg Leu Leu Gly Ile Cys Leu Thr Ser
    770                 775                 780
Thr Val Gln Leu Ile Thr Gln Leu Met Pro Phe Gly Cys Leu Leu Asp
785                 790                 795                 800
Tyr Val Arg Glu His Lys Asp Asn Ile Gly Ser Gln Tyr Leu Leu Asn
                805                 810                 815
Trp Cys Val Gln Ile Ala Lys Gly Met Asn Tyr Leu Glu Asp Arg Arg
            820                 825                 830
Leu Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Lys Thr Pro
        835                 840                 845
Gln His Val Lys Ile Thr Asp Phe Gly Leu Ala Lys Leu Leu Gly Ala
    850                 855                 860
Glu Glu Lys Glu Tyr His Ala Glu Gly Gly Lys Val Pro Ile Lys Trp
865                 870                 875                 880
Met Ala Leu Glu Ser Ile Leu His Arg Ile Tyr Thr His Gln Ser Asp
                885                 890                 895
Val Trp Ser Tyr Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ser
            900                 905                 910
Lys Pro Tyr Asp Gly Ile Pro Ala Ser Glu Ile Ser Ser Ile Leu Glu
        915                 920                 925
Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile Cys Thr Ile Asp Val Tyr
    930                 935                 940
Met Ile Met Val Lys Cys Trp Met Ile Asp Ala Asp Ser Arg Pro Lys
945                 950                 955                 960
Phe Arg Glu Leu Ile Ile Glu Phe Ser Lys Met Ala Arg Asp Pro Gln
                965                 970                 975
Arg Tyr Leu Val Ile Gln Gly Asp Glu Arg Met His Leu Pro Ser Pro
            980                 985                 990
Thr Asp Ser Asn Phe Tyr Arg Ala  Leu Met Asp Glu Glu  Asp Met Asp
        995                 1000                1005
Asp Val  Val Asp Ala Asp Glu  Tyr Leu Ile Pro Gln  Gln Gly Phe
    1010                1015                1020
Phe Ser  Ser Pro Ser Thr Ser  Arg Thr Pro Leu Leu  Ser Ser Leu
    1025                1030                1035
Ser Ala  Thr Ser Asn Asn Ser  Thr Val Ala Cys Ile  Asp Arg Asn
    1040                1045                1050
Gly Leu  Gln Ser Cys Pro Ile  Lys Glu Asp Ser Phe  Leu Gln Arg
    1055                1060                1065
Tyr Ser  Ser Asp Pro Thr Gly  Ala Leu Thr Glu Asp  Ser Ile Asp
    1070                1075                1080
Asp Thr  Phe Leu Pro Val Pro  Glu Tyr Ile Asn Gln  Ser Val Pro
    1085                1090                1095
Lys Arg  Pro Ala Gly Ser Val  Gln Asn Pro Val Tyr  His Asn Gln
    1100                1105                1110
Pro Leu  Asn Pro Ala Pro Ser  Arg Asp Pro His Tyr  Gln Asp Pro
    1115                1120                1125
His Ser  Thr Ala Val Gly Asn  Pro Glu Tyr Leu Asn  Thr Val Gln
    1130                1135                1140
Pro Thr  Cys Val Asn Ser Thr  Phe Asp Ser Pro Ala  His Trp Ala
    1145                1150                1155
Gln Lys  Gly Ser His Gln Ile  Ser Leu Asp Asn Pro  Asp Tyr Gln
```

1160 1165 1170
Gln Asp Phe Phe Pro Lys Glu Ala Lys Pro Asn Gly Ile Phe Lys
1175 1180 1185
Gly Ser Thr Ala Glu Asn Ala Glu Tyr Leu Arg Val Ala Pro Gln
1190 1195 1200
Ser Ser Glu Phe Ile Gly Ala
1205 1210

<210> 184
<211> 453
<212> PRT
<213> Homo sapiens
<400> 184
Met Pro Lys Asn Lys Lys Arg Asn Thr Pro His Arg Gly Ser Ser Ala
1 5 10 15
Gly Gly Gly Gly Ser Gly Ala Ala Ala Ala Thr Ala Ala Thr Ala Gly
20 25 30
Gly Gln His Arg Asn Val Gln Pro Phe Ser Asp Glu Asp Ala Ser Ile
35 40 45
Glu Thr Met Ser His Cys Ser Gly Tyr Ser Asp Pro Ser Ser Phe Ala
50 55 60
Glu Asp Gly Pro Glu Val Leu Asp Glu Glu Gly Thr Gln Glu Asp Leu
65 70 75 80
Glu Tyr Lys Arg Lys Gly Leu Ile Asp Leu Thr Leu Asp Lys Ser Ala
85 90 95
Lys Thr Arg Gln Ala Ala Leu Glu Gly Ile Lys Asn Ala Leu Ala Ser
100 105 110
Lys Met Leu Tyr Glu Phe Ile Leu Glu Arg Arg Met Thr Leu Thr Asp
115 120 125
Ser Ile Glu Arg Cys Leu Lys Lys Gly Lys Ser Asp Glu Gln Arg Ala
130 135 140
Ala Ala Ala Leu Ala Ser Val Leu Cys Ile Gln Leu Gly Pro Gly Ile
145 150 155 160
Glu Ser Glu Glu Ile Leu Lys Thr Leu Gly Pro Ile Leu Lys Lys Ile
165 170 175
Ile Cys Asp Gly Ser Ala Ser Met Gln Ala Arg Gln Thr Cys Ala Thr
180 185 190
Cys Phe Gly Val Cys Cys Phe Ile Ala Thr Asp Asp Ile Thr Glu Leu
195 200 205
Tyr Ser Thr Leu Glu Cys Leu Glu Asn Ile Phe Thr Lys Ser Tyr Leu
210 215 220
Lys Glu Lys Asp Thr Thr Val Ile Cys Ser Thr Pro Asn Thr Val Leu
225 230 235 240
His Ile Ser Ser Leu Leu Ala Trp Thr Leu Leu Leu Thr Ile Cys Pro
245 250 255
Ile Asn Glu Val Lys Lys Lys Leu Glu Met His Phe His Lys Leu Pro
260 265 270
Ser Leu Leu Ser Cys Asp Asp Val Asn Met Arg Ile Ala Ala Gly Glu
275 280 285
Ser Leu Ala Leu Leu Phe Glu Leu Ala Arg Gly Ile Glu Ser Asp Phe
290 295 300
Phe Tyr Glu Asp Met Glu Ser Leu Thr Gln Met Leu Arg Ala Leu Ala
305 310 315 320
Thr Asp Gly Asn Lys His Arg Ala Lys Val Asp Lys Arg Lys Gln Arg
325 330 335
Ser Val Phe Arg Asp Val Leu Arg Ala Val Glu Glu Arg Asp Phe Pro
340 345 350
Thr Glu Thr Ile Lys Phe Gly Pro Glu Arg Met Tyr Ile Asp Cys Trp
355 360 365
Val Lys Lys His Thr Tyr Asp Thr Phe Lys Glu Val Leu Gly Ser Gly
370 375 380
Met Gln Tyr Pro Leu Ala Val Lys Met Glu Phe Leu Glu Asn Val Phe
385 390 395 400
Glu Thr Trp Thr Pro Ser Asp Ala Leu Met Leu Gln Arg Leu Lys Thr
405 410 415
Met Lys Ile Ser Arg Phe Glu Arg His Leu Tyr Asn Ser Ala Ala Phe
420 425 430
Lys Ala Arg Thr Lys Ala Arg Ser Lys Cys Arg Asp Lys Arg Ala Asp
435 440 445

Val Gly Glu Phe Phe
450

<210> 185
<211> 341
<212> PRT
<213> Homo sapiens
<400> 185
Met Pro Lys Arg Lys Val Thr Phe Gln Gly Val Gly Asp Glu Glu Asp
1 5 10 15
Glu Asp Glu Ile Ile Val Pro Lys Lys Lys Leu Val Asp Pro Val Ala
20 25 30
Gly Ser Gly Gly Pro Gly Ser Arg Phe Lys Gly Lys His Ser Leu Asp
35 40 45
Ser Asp Glu Glu Glu Asp Asp Asp Asp Gly Gly Ser Ser Lys Tyr Asp
50 55 60
Ile Leu Ala Ser Glu Asp Val Glu Gly Gln Glu Ala Ala Thr Leu Pro
65 70 75 80
Ser Glu Gly Gly Val Arg Ile Thr Pro Phe Asn Leu Gln Glu Glu Met
85 90 95
Glu Glu Gly His Phe Asp Ala Asp Gly Asn Tyr Phe Leu Asn Arg Asp
100 105 110
Ala Gln Ile Arg Asp Ser Trp Leu Asp Asn Ile Asp Trp Val Lys Ile
115 120 125
Arg Glu Arg Pro Pro Gly Gln Arg Gln Ala Ser Asp Ser Glu Glu Glu
130 135 140
Asp Ser Leu Gly Gln Thr Ser Met Ser Ala Gln Ala Leu Leu Glu Gly
145 150 155 160
Leu Leu Glu Leu Leu Leu Pro Arg Glu Thr Val Ala Gly Ala Leu Arg
165 170 175
Arg Leu Gly Ala Arg Gly Gly Gly Lys Gly Arg Lys Gly Pro Gly Gln
180 185 190
Pro Ser Ser Pro Gln Arg Leu Asp Arg Leu Ser Gly Leu Ala Asp Gln
195 200 205
Met Val Ala Arg Gly Asn Leu Gly Val Tyr Gln Glu Thr Arg Glu Arg
210 215 220
Leu Ala Met Arg Leu Lys Gly Leu Gly Cys Gln Thr Leu Gly Pro His
225 230 235 240
Asn Pro Thr Pro Pro Pro Ser Leu Asp Met Phe Ala Glu Glu Leu Ala
245 250 255
Glu Glu Glu Leu Glu Thr Pro Thr Pro Thr Gln Arg Gly Glu Ala Glu
260 265 270
Ser Arg Gly Asp Gly Leu Val Asp Val Met Trp Glu Tyr Lys Trp Glu
275 280 285
Asn Thr Gly Asp Ala Glu Leu Tyr Gly Pro Phe Thr Ser Ala Gln Met
290 295 300
Gln Thr Trp Val Ser Glu Gly Tyr Phe Pro Asp Gly Val Tyr Cys Arg
305 310 315 320
Lys Leu Asp Pro Pro Gly Gly Gln Phe Tyr Asn Ser Lys Arg Ile Asp
325 330 335
Phe Asp Leu Tyr Thr
340

<210> 186
<211> 182
<212> PRT
<213> Homo sapiens
<400> 186
Met Gly Leu Leu Ser Ile Leu Arg Lys Leu Lys Ser Ala Pro Asp Gln
1 5 10 15
Glu Val Arg Ile Leu Leu Leu Gly Leu Asp Asn Ala Gly Lys Thr Thr
20 25 30
Leu Leu Lys Gln Leu Ala Ser Glu Asp Ile Ser His Ile Thr Pro Thr
35 40 45
Gln Gly Phe Asn Ile Lys Ser Val Gln Ser Gln Gly Phe Lys Leu Asn
50 55 60
Val Trp Asp Ile Gly Gly Gln Arg Lys Ile Arg Pro Tyr Trp Lys Asn
65 70 75 80
Tyr Phe Glu Asn Thr Asp Ile Leu Ile Tyr Val Ile Asp Ser Ala Asp

```
                85                  90                  95
Arg Lys Arg Phe Glu Glu Thr Gly Gln Glu Leu Ala Glu Leu Leu Glu
            100                 105                 110
Glu Glu Lys Leu Ser Cys Val Pro Val Leu Ile Phe Ala Asn Lys Gln
        115                 120                 125
Asp Leu Leu Thr Ala Ala Pro Ala Ser Glu Ile Ala Glu Gly Leu Asn
    130                 135                 140
Leu His Thr Ile Arg Asp Arg Val Trp Gln Ile Gln Ser Cys Ser Ala
145                 150                 155                 160
Leu Thr Gly Glu Gly Val Gln Asp Gly Met Asn Trp Val Cys Lys Asn
                165                 170                 175
Val Asn Ala Lys Lys Lys
            180
```

<210> 187
<211> 398
<212> PRT
<213> Homo sapiens
<400> 187

```
Met Ala Leu Leu Arg Arg Pro Thr Val Ser Ser Asp Leu Glu Asn Ile
1               5                  10                  15
Asp Thr Gly Val Asn Ser Lys Val Lys Ser His Val Thr Ile Arg Arg
            20                  25                  30
Thr Val Leu Glu Glu Ile Gly Asn Arg Val Thr Thr Arg Ala Ala Gln
        35                  40                  45
Val Ala Lys Lys Ala Gln Asn Thr Lys Val Pro Val Gln Pro Thr Lys
    50                  55                  60
Thr Thr Asn Val Asn Lys Gln Leu Lys Pro Thr Ala Ser Val Lys Pro
65                  70                  75                  80
Val Gln Met Glu Lys Leu Ala Pro Lys Gly Pro Ser Pro Thr Pro Glu
                85                  90                  95
Asp Val Ser Met Lys Glu Glu Asn Leu Cys Gln Ala Phe Ser Asp Ala
            100                 105                 110
Leu Leu Cys Lys Ile Glu Asp Ile Asp Asn Glu Asp Trp Glu Asn Pro
        115                 120                 125
Gln Leu Cys Ser Asp Tyr Val Lys Asp Ile Tyr Gln Tyr Leu Arg Gln
    130                 135                 140
Leu Glu Val Leu Gln Ser Ile Asn Pro His Phe Leu Asp Gly Arg Asp
145                 150                 155                 160
Ile Asn Gly Arg Met Arg Ala Ile Leu Val Asp Trp Leu Val Gln Val
                165                 170                 175
His Ser Lys Phe Arg Leu Leu Gln Glu Thr Leu Tyr Met Cys Val Gly
            180                 185                 190
Ile Met Asp Arg Phe Leu Gln Val Gln Pro Val Ser Arg Lys Lys Leu
        195                 200                 205
Gln Leu Val Gly Ile Thr Ala Leu Leu Leu Ala Ser Lys Tyr Glu Glu
    210                 215                 220
Met Phe Ser Pro Asn Ile Glu Asp Phe Val Tyr Ile Thr Asp Asn Ala
225                 230                 235                 240
Tyr Thr Ser Ser Gln Ile Arg Glu Met Glu Thr Leu Ile Leu Lys Glu
                245                 250                 255
Leu Lys Phe Glu Leu Gly Arg Pro Leu Pro Leu His Phe Leu Arg Arg
            260                 265                 270
Ala Ser Lys Ala Gly Glu Val Asp Val Glu Gln His Thr Leu Ala Lys
        275                 280                 285
Tyr Leu Met Glu Leu Thr Leu Ile Asp Tyr Asp Met Val His Tyr His
    290                 295                 300
Pro Ser Lys Val Ala Ala Ala Ala Ser Cys Leu Ser Gln Lys Val Leu
305                 310                 315                 320
Gly Gln Gly Lys Trp Asn Leu Lys Gln Gln Tyr Tyr Thr Gly Tyr Thr
                325                 330                 335
Glu Asn Glu Val Leu Glu Val Met Gln His Met Ala Lys Asn Val Val
            340                 345                 350
Lys Val Asn Glu Asn Leu Thr Lys Phe Ile Ala Ile Lys Asn Lys Tyr
        355                 360                 365
Ala Ser Ser Lys Leu Leu Lys Ile Ser Met Ile Pro Gln Leu Asn Ser
    370                 375                 380
Lys Ala Val Lys Asp Leu Ala Ser Pro Leu Ile Gly Arg Ser
385                 390                 395
```

<210> 188
<211> 376
<212> PRT
<213> Homo sapiens
<400> 188

```
Met Gln Trp Ala Ser Leu Leu Leu Leu Ala Gly Leu Phe Ser Leu Ser
1               5                  10                  15
Gln Ala Gln Tyr Glu Asp Asp Pro His Trp Trp Phe His Tyr Leu Arg
            20                  25                  30
Ser Gln Gln Ser Thr Tyr Tyr Asp Pro Tyr Asp Pro Tyr Pro Tyr Glu
        35                  40                  45
Thr Tyr Glu Pro Tyr Pro Tyr Gly Val Asp Glu Gly Pro Ala Tyr Thr
    50                  55                  60
Tyr Gly Ser Pro Ser Pro Pro Asp Pro Arg Asp Cys Pro Gln Glu Cys
65                  70                  75                  80
Asp Cys Pro Pro Asn Phe Leu Thr Ala Met Tyr Cys Asp Asn Arg Asn
                85                  90                  95
Leu Lys Tyr Leu Pro Phe Val Pro Ser Arg Met Lys Tyr Val Tyr Phe
            100                 105                 110
Gln Asn Asn Gln Ile Thr Ser Ile Gln Glu Gly Val Phe Asp Asn Ala
        115                 120                 125
Thr Gly Leu Leu Trp Ile Ala Leu His Gly Asn Gln Ile Thr Ser Asp
    130                 135                 140
Lys Val Gly Arg Lys Val Phe Ser Lys Leu Arg His Leu Glu Arg Leu
145                 150                 155                 160
Tyr Leu Asp His Asn Asn Leu Thr Arg Met Pro Gly Pro Leu Pro Arg
                165                 170                 175
Ser Leu Arg Glu Leu His Leu Asp His Asn Gln Ile Ser Arg Val Pro
            180                 185                 190
Asn Asn Ala Leu Glu Gly Leu Glu Asn Leu Thr Ala Leu Tyr Leu Gln
        195                 200                 205
His Asp Glu Ile Gln Glu Val Gly Ser Ser Met Arg Gly Leu Arg Ser
    210                 215                 220
Leu Ile Leu Leu Asp Leu Ser Tyr Asn His Leu Arg Lys Val Pro Asp
225                 230                 235                 240
Gly Leu Pro Ser Ala Leu Glu Gln Leu Tyr Met Glu His Asn Asn Val
                245                 250                 255
Tyr Thr Val Pro Asp Ser Tyr Phe Arg Gly Ala Pro Lys Leu Leu Tyr
            260                 265                 270
Val Arg Leu Ser His Asn Ser Leu Thr Asn Asn Gly Leu Ala Ser Asn
        275                 280                 285
Thr Phe Asn Ser Ser Ser Leu Leu Glu Leu Asp Leu Ser Tyr Asn Gln
    290                 295                 300
Leu Gln Lys Ile Pro Pro Val Asn Thr Asn Leu Glu Asn Leu Tyr Leu
305                 310                 315                 320
Gln Gly Asn Arg Ile Asn Glu Phe Ser Ile Ser Ser Phe Cys Thr Val
                325                 330                 335
Val Asp Val Val Asn Phe Ser Lys Leu Gln Val Val Arg Leu Asp Gly
            340                 345                 350
Asn Glu Ile Lys Arg Ser Ala Met Pro Ala Asp Ala Pro Leu Cys Leu
        355                 360                 365
Arg Leu Ala Ser Leu Ile Glu Ile
    370                 375
```

<210> 189
<211> 535
<212> PRT
<213> Homo sapiens
<400> 189

```
Met Glu Glu Gly Ala Arg His Arg Asn Asn Thr Glu Lys Lys His Pro
1               5                  10                  15
Gly Gly Gly Glu Ser Asp Ala Ser Pro Glu Ala Gly Ser Gly Gly Gly
            20                  25                  30
Gly Val Ala Leu Lys Lys Glu Ile Gly Leu Val Ser Ala Cys Gly Ile
        35                  40                  45
Ile Val Gly Asn Ile Ile Gly Ser Gly Ile Phe Val Ser Pro Lys Gly
    50                  55                  60
Val Leu Glu Asn Ala Gly Ser Val Gly Leu Ala Leu Ile Val Trp Ile
```

```
65                  70                  75                  80
Val Thr Gly Phe Ile Thr Val Val Gly Ala Leu Cys Tyr Ala Glu Leu
                85                  90                  95
Gly Val Thr Ile Pro Lys Ser Gly Gly Asp Tyr Ser Tyr Val Lys Asp
            100                 105                 110
Ile Phe Gly Gly Leu Ala Gly Phe Leu Arg Leu Trp Ile Ala Val Leu
        115                 120                 125
Val Ile Tyr Pro Thr Asn Gln Ala Val Ile Ala Leu Thr Phe Ser Asn
    130                 135                 140
Tyr Val Leu Gln Pro Leu Phe Pro Thr Cys Phe Pro Pro Glu Ser Gly
145                 150                 155                 160
Leu Arg Leu Leu Ala Ala Ile Cys Leu Leu Leu Leu Thr Trp Val Asn
                165                 170                 175
Cys Ser Ser Val Arg Trp Ala Thr Arg Val Gln Asp Ile Phe Thr Ala
            180                 185                 190
Gly Lys Leu Leu Ala Leu Ala Leu Ile Ile Ile Met Gly Ile Val Gln
        195                 200                 205
Ile Cys Lys Gly Glu Tyr Phe Trp Leu Glu Pro Lys Asn Ala Phe Glu
    210                 215                 220
Asn Phe Gln Glu Pro Asp Ile Gly Leu Val Ala Leu Ala Phe Leu Gln
225                 230                 235                 240
Gly Ser Phe Ala Tyr Gly Gly Trp Asn Phe Leu Asn Tyr Val Thr Glu
                245                 250                 255
Glu Leu Val Asp Pro Tyr Lys Asn Leu Pro Arg Ala Ile Phe Ile Ser
            260                 265                 270
Ile Pro Leu Val Thr Phe Val Tyr Val Phe Ala Asn Val Ala Tyr Val
        275                 280                 285
Thr Ala Met Ser Pro Gln Glu Leu Leu Ala Ser Asn Ala Val Ala Val
    290                 295                 300
Thr Phe Gly Glu Lys Leu Leu Gly Val Met Ala Trp Ile Met Pro Ile
305                 310                 315                 320
Ser Val Ala Leu Ser Thr Phe Gly Gly Val Asn Gly Ser Leu Phe Thr
                325                 330                 335
Ser Ser Arg Leu Phe Phe Ala Gly Ala Arg Glu Gly His Leu Pro Ser
            340                 345                 350
Val Leu Ala Met Ile His Val Lys Arg Cys Thr Pro Ile Pro Ala Leu
        355                 360                 365
Leu Phe Thr Cys Ile Ser Thr Leu Leu Met Leu Val Thr Ser Asp Met
    370                 375                 380
Tyr Thr Leu Ile Asn Tyr Val Gly Phe Ile Asn Tyr Leu Phe Tyr Gly
385                 390                 395                 400
Val Thr Val Ala Gly Gln Ile Val Leu Arg Trp Lys Lys Pro Asp Ile
                405                 410                 415
Pro Arg Pro Ile Lys Ile Asn Leu Leu Phe Pro Ile Ile Tyr Leu Leu
            420                 425                 430
Phe Trp Ala Phe Leu Leu Val Phe Ser Leu Trp Ser Glu Pro Val Val
        435                 440                 445
Cys Gly Ile Gly Leu Ala Ile Met Leu Thr Gly Val Pro Val Tyr Phe
    450                 455                 460
Leu Gly Val Tyr Trp Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile
465                 470                 475                 480
Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr Pro
                485                 490                 495
Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp Met Glu
            500                 505                 510
Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys Asp Lys Asp
        515                 520                 525
Val Ala Gly Gln Pro Gln Pro
    530                 535
```

<210> 190
<211> 225
<212> PRT
<213> Homo sapiens
<400> 190

```
Met Asn Ser Asn Val Glu Asn Leu Pro Pro His Ile Ile Arg Leu Val
1               5                  10                  15
Tyr Lys Glu Val Thr Thr Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys
            20                  25                  30
```

Val Phe Pro Asn Glu Glu Asp Leu Thr Asp Leu Gln Val Thr Ile Glu
35 40 45
Gly Pro Glu Gly Thr Pro Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu
50 55 60
Leu Leu Gly Lys Asp Phe Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu
65 70 75 80
Thr Lys Ile Phe His Pro Asn Val Gly Ala Asn Gly Glu Ile Cys Val
85 90 95
Asn Val Leu Lys Arg Asp Trp Thr Ala Glu Leu Gly Ile Arg His Val
100 105 110
Leu Leu Thr Ile Lys Cys Leu Leu Ile His Pro Asn Pro Glu Ser Ala
115 120 125
Leu Asn Glu Glu Ala Gly Arg Leu Leu Leu Glu Asn Tyr Glu Glu Tyr
130 135 140
Ala Ala Arg Ala Arg Leu Leu Thr Glu Ile His Gly Gly Ala Gly Gly
145 150 155 160
Pro Ser Gly Arg Ala Glu Ala Gly Arg Ala Leu Ala Ser Gly Thr Glu
165 170 175
Ala Ser Ser Thr Asp Pro Gly Ala Pro Gly Gly Pro Gly Gly Ala Glu
180 185 190
Gly Pro Met Ala Lys Lys His Ala Gly Glu Arg Asp Lys Lys Leu Ala
195 200 205
Ala Lys Lys Lys Thr Asp Lys Lys Arg Ala Leu Arg Ala Leu Arg Arg
210 215 220
Leu
225

<210> 191
<211> 485
<212> PRT
<213> Homo sapiens
<400> 191
Met Arg Lys Arg Ala Pro Gln Ser Glu Met Ala Pro Ala Gly Val Ser
1 5 10 15
Leu Arg Ala Thr Ile Leu Cys Leu Leu Ala Trp Ala Gly Leu Ala Ala
20 25 30
Gly Asp Arg Val Tyr Ile His Pro Phe His Leu Val Ile His Asn Glu
35 40 45
Ser Thr Cys Glu Gln Leu Ala Lys Ala Asn Ala Gly Lys Pro Lys Asp
50 55 60
Pro Thr Phe Ile Pro Ala Pro Ile Gln Ala Lys Thr Ser Pro Val Asp
65 70 75 80
Glu Lys Ala Leu Gln Asp Gln Leu Val Leu Val Ala Ala Lys Leu Asp
85 90 95
Thr Glu Asp Lys Leu Arg Ala Ala Met Val Gly Met Leu Ala Asn Phe
100 105 110
Leu Gly Phe Arg Ile Tyr Gly Met His Ser Glu Leu Trp Gly Val Val
115 120 125
His Gly Ala Thr Val Leu Ser Pro Thr Ala Val Phe Gly Thr Leu Ala
130 135 140
Ser Leu Tyr Leu Gly Ala Leu Asp His Thr Ala Asp Arg Leu Gln Ala
145 150 155 160
Ile Leu Gly Val Pro Trp Lys Asp Lys Asn Cys Thr Ser Arg Leu Asp
165 170 175
Ala His Lys Val Leu Ser Ala Leu Gln Ala Val Gln Gly Leu Leu Val
180 185 190
Ala Gln Gly Arg Ala Asp Ser Gln Ala Gln Leu Leu Leu Ser Thr Val
195 200 205
Val Gly Val Phe Thr Ala Pro Gly Leu His Leu Lys Gln Pro Phe Val
210 215 220
Gln Gly Leu Ala Leu Tyr Thr Pro Val Val Leu Pro Arg Ser Leu Asp
225 230 235 240
Phe Thr Glu Leu Asp Val Ala Ala Glu Lys Ile Asp Arg Phe Met Gln
245 250 255
Ala Val Thr Gly Trp Lys Thr Gly Cys Ser Leu Met Gly Ala Ser Val
260 265 270
Asp Ser Thr Leu Ala Phe Asn Thr Tyr Val His Phe Gln Gly Lys Met
275 280 285
Lys Gly Phe Ser Leu Leu Ala Glu Pro Gln Glu Phe Trp Val Asp Asn

290 295 300
Ser Thr Ser Val Ser Val Pro Met Leu Ser Gly Met Gly Thr Phe Gln
305 310 315 320
His Trp Ser Asp Ile Gln Asp Asn Phe Ser Val Thr Gln Val Pro Phe
325 330 335
Thr Glu Ser Ala Cys Leu Leu Leu Ile Gln Pro His Tyr Ala Ser Asp
340 345 350
Leu Asp Lys Val Glu Gly Leu Thr Phe Gln Gln Asn Ser Leu Asn Trp
355 360 365
Met Lys Lys Leu Ser Pro Arg Thr Ile His Leu Thr Met Pro Gln Leu
370 375 380
Val Leu Gln Gly Ser Tyr Asp Leu Gln Asp Leu Leu Ala Gln Ala Glu
385 390 395 400
Leu Pro Ala Ile Leu His Thr Glu Leu Asn Leu Gln Lys Leu Ser Asn
405 410 415
Asp Arg Ile Arg Val Gly Glu Val Leu Asn Ser Ile Phe Phe Glu Leu
420 425 430
Glu Ala Asp Glu Arg Glu Pro Thr Glu Ser Thr Gln Gln Leu Asn Lys
435 440 445
Pro Glu Val Leu Glu Val Thr Leu Asn Arg Pro Phe Leu Phe Ala Val
450 455 460
Tyr Asp Gln Ser Ala Thr Ala Leu His Phe Leu Gly Arg Val Ala Asn
465 470 475 480
Pro Leu Ser Thr Ala
485

<210> 192
<211> 279
<212> PRT
<213> Homo sapiens
<400> 192
Met Thr Glu Arg Phe Asp Cys His His Cys Asn Glu Ser Leu Phe Gly
1 5 10 15
Lys Lys Tyr Ile Leu Arg Glu Glu Ser Pro Tyr Cys Val Val Cys Phe
20 25 30
Glu Thr Leu Phe Ala Asn Thr Cys Glu Glu Cys Gly Lys Pro Ile Gly
35 40 45
Cys Asp Cys Lys Asp Leu Ser Tyr Lys Asp Arg His Trp His Glu Ala
50 55 60
Cys Phe His Cys Ser Gln Cys Arg Asn Ser Leu Val Asp Lys Pro Phe
65 70 75 80
Ala Ala Lys Glu Asp Gln Leu Leu Cys Thr Asp Cys Tyr Ser Asn Glu
85 90 95
Tyr Ser Ser Lys Cys Gln Glu Cys Lys Lys Thr Ile Met Pro Gly Thr
100 105 110
Arg Lys Met Glu Tyr Lys Gly Ser Ser Trp His Glu Thr Cys Phe Ile
115 120 125
Cys His Arg Cys Gln Gln Pro Ile Gly Thr Lys Ser Phe Ile Pro Lys
130 135 140
Asp Asn Gln Asn Phe Cys Val Pro Cys Tyr Glu Lys Gln His Ala Met
145 150 155 160
Gln Cys Val Gln Cys Lys Lys Pro Ile Thr Thr Gly Gly Val Thr Tyr
165 170 175
Arg Glu Gln Pro Trp His Lys Glu Cys Phe Val Cys Thr Ala Cys Arg
180 185 190
Lys Gln Leu Ser Gly Gln Arg Phe Thr Ala Arg Asp Asp Phe Ala Tyr
195 200 205
Cys Leu Asn Cys Phe Cys Asp Leu Tyr Ala Lys Lys Cys Ala Gly Cys
210 215 220
Thr Asn Pro Ile Ser Gly Leu Gly Gly Thr Lys Tyr Ile Ser Phe Glu
225 230 235 240
Glu Arg Gln Trp His Asn Asp Cys Phe Asn Cys Lys Lys Cys Ser Leu
245 250 255
Ser Leu Val Gly Arg Gly Phe Leu Thr Glu Arg Asp Asp Ile Leu Cys
260 265 270
Pro Asp Cys Gly Lys Asp Ile
275

<210> 193

<211> 738
<212> PRT
<213> Homo sapiens
<400> 193

```
Met Glu Lys Ser Arg Met Asn Leu Pro Lys Gly Pro Asp Thr Leu Cys
1               5                  10                  15
Phe Asp Lys Asp Glu Phe Met Lys Glu Asp Phe Asp Val Asp His Phe
            20                  25                  30
Val Ser Asp Cys Arg Lys Arg Val Gln Leu Glu Glu Leu Arg Asp Asp
        35                  40                  45
Leu Glu Leu Tyr Tyr Lys Leu Leu Lys Thr Ala Met Val Glu Leu Ile
    50                  55                  60
Asn Lys Asp Tyr Ala Asp Phe Val Asn Leu Ser Thr Asn Leu Val Gly
65                  70                  75                  80
Met Asp Lys Ala Leu Asn Gln Leu Ser Val Pro Leu Gly Gln Leu Arg
                85                  90                  95
Glu Glu Val Leu Ser Leu Arg Ser Ser Val Ser Glu Gly Ile Arg Ala
            100                 105                 110
Val Asp Glu Arg Met Ser Lys Gln Glu Asp Ile Arg Lys Lys Lys Met
        115                 120                 125
Cys Val Leu Arg Leu Ile Gln Val Ile Arg Ser Val Glu Lys Ile Glu
    130                 135                 140
Lys Ile Leu Asn Ser Gln Ser Ser Lys Glu Thr Ser Ala Leu Glu Ala
145                 150                 155                 160
Ser Ser Pro Leu Leu Thr Gly Gln Ile Leu Glu Arg Ile Ala Thr Glu
                165                 170                 175
Phe Asn Gln Leu Gln Phe His Ala Val Gln Ser Lys Gly Met Pro Leu
            180                 185                 190
Leu Asp Lys Val Arg Pro Arg Ile Ala Gly Ile Thr Ala Met Leu Gln
        195                 200                 205
Gln Ser Leu Glu Gly Leu Leu Leu Glu Gly Leu Gln Thr Ser Asp Val
    210                 215                 220
Asp Ile Ile Arg His Cys Leu Arg Thr Tyr Ala Thr Ile Asp Lys Thr
225                 230                 235                 240
Arg Asp Ala Glu Ala Leu Val Gly Gln Val Leu Val Lys Pro Tyr Ile
                245                 250                 255
Asp Glu Val Ile Ile Glu Gln Phe Val Glu Ser His Pro Asn Gly Leu
            260                 265                 270
Gln Val Met Tyr Asn Lys Leu Leu Glu Phe Val Pro His His Cys Arg
        275                 280                 285
Leu Leu Arg Glu Val Thr Gly Gly Ala Ile Ser Ser Glu Lys Gly Asn
    290                 295                 300
Thr Val Pro Gly Tyr Asp Phe Leu Val Asn Ser Val Trp Pro Gln Ile
305                 310                 315                 320
Val Gln Gly Leu Glu Glu Lys Leu Pro Ser Leu Phe Asn Pro Gly Asn
                325                 330                 335
Pro Asp Ala Phe His Glu Lys Tyr Thr Ile Ser Met Asp Phe Val Arg
            340                 345                 350
Arg Leu Glu Arg Gln Cys Gly Ser Gln Ala Ser Val Lys Arg Leu Arg
        355                 360                 365
Ala His Pro Ala Tyr His Ser Phe Asn Lys Lys Trp Asn Leu Pro Val
    370                 375                 380
Tyr Phe Gln Ile Arg Phe Arg Glu Ile Ala Gly Ser Leu Glu Ala Ala
385                 390                 395                 400
Leu Thr Asp Val Leu Glu Asp Ala Pro Ala Glu Ser Pro Tyr Cys Leu
                405                 410                 415
Leu Ala Ser His Arg Thr Trp Ser Ser Leu Arg Arg Cys Trp Ser Asp
            420                 425                 430
Glu Met Phe Leu Pro Leu Leu Val His Arg Leu Trp Arg Leu Thr Leu
        435                 440                 445
Gln Ile Leu Ala Arg Tyr Ser Val Phe Val Asn Glu Leu Ser Leu Arg
    450                 455                 460
Pro Ile Ser Asn Glu Ser Pro Lys Glu Ile Lys Lys Pro Leu Val Thr
465                 470                 475                 480
Gly Ser Lys Glu Pro Ser Ile Thr Gln Gly Asn Thr Glu Asp Gln Gly
                485                 490                 495
Ser Gly Pro Ser Glu Thr Lys Pro Val Val Ser Ile Ser Arg Thr Gln
            500                 505                 510
Leu Val Tyr Val Val Ala Asp Leu Asp Lys Leu Gln Glu Gln Leu Pro
```

515 520 525
Glu Leu Leu Glu Ile Ile Lys Pro Lys Leu Glu Met Ile Gly Phe Lys
530 535 540
Asn Phe Ser Ser Ile Ser Ala Ala Leu Glu Asp Ser Gln Ser Ser Phe
545 550 555 560
Ser Ala Cys Val Pro Ser Leu Ser Ser Lys Ile Ile Gln Asp Leu Ser
565 570 575
Asp Ser Cys Phe Gly Phe Leu Lys Ser Ala Leu Glu Val Pro Arg Leu
580 585 590
Tyr Arg Arg Thr Asn Lys Glu Val Pro Thr Thr Ala Ser Ser Tyr Val
595 600 605
Asp Ser Ala Leu Lys Pro Leu Phe Gln Leu Gln Ser Gly His Lys Asp
610 615 620
Lys Leu Lys Gln Ala Ile Ile Gln Gln Trp Leu Glu Gly Thr Leu Ser
625 630 635 640
Glu Ser Thr His Lys Tyr Tyr Glu Thr Val Ser Asp Val Leu Asn Ser
645 650 655
Val Lys Lys Met Glu Glu Ser Leu Lys Arg Leu Lys Gln Ala Arg Lys
660 665 670
Thr Thr Pro Ala Asn Pro Val Gly Pro Ser Gly Gly Met Ser Asp Asp
675 680 685
Asp Lys Ile Arg Leu Gln Leu Ala Leu Asp Val Glu Tyr Leu Gly Glu
690 695 700
Gln Ile Gln Lys Leu Gly Leu Gln Ala Ser Asp Ile Lys Ser Phe Ser
705 710 715 720
Ala Leu Ala Glu Leu Val Ala Ala Ala Lys Asp Gln Ala Thr Ala Glu
725 730 735
Gln Pro

<210> 194
<211> 963
<212> PRT
<213> Homo sapiens
<400> 194
Met Ala Val Phe Pro Trp His Ser Arg Asn Arg Asn Tyr Lys Ala Glu
1 5 10 15
Phe Ala Ser Cys Arg Leu Glu Ala Val Pro Leu Glu Phe Gly Asp Tyr
20 25 30
His Pro Leu Lys Pro Ile Thr Val Thr Glu Ser Lys Thr Lys Lys Val
35 40 45
Asn Arg Lys Gly Ser Thr Ser Ser Thr Ser Ser Ser Ser Ser Ser Ser
50 55 60
Val Val Asp Pro Leu Ser Ser Val Leu Asp Gly Thr Asp Pro Leu Ser
65 70 75 80
Met Phe Ala Ala Thr Ala Asp Pro Ala Ala Leu Ala Ala Ala Met Asp
85 90 95
Ser Ser Arg Arg Lys Arg Asp Arg Asp Asp Asn Ser Val Val Gly Ser
100 105 110
Asp Phe Glu Pro Trp Thr Asn Lys Arg Gly Glu Ile Leu Ala Arg Tyr
115 120 125
Thr Thr Thr Glu Lys Leu Ser Ile Asn Leu Phe Met Gly Ser Glu Lys
130 135 140
Gly Lys Ala Gly Thr Ala Thr Leu Ala Met Ser Glu Lys Val Arg Thr
145 150 155 160
Arg Leu Glu Glu Leu Asp Asp Phe Glu Glu Gly Ser Gln Lys Glu Leu
165 170 175
Leu Asn Leu Thr Gln Gln Asp Tyr Val Asn Arg Ile Glu Glu Leu Asn
180 185 190
Gln Ser Leu Lys Asp Ala Trp Ala Ser Asp Gln Lys Val Lys Ala Leu
195 200 205
Lys Ile Val Ile Gln Cys Ser Lys Leu Leu Ser Asp Thr Ser Val Ile
210 215 220
Gln Phe Tyr Pro Ser Lys Phe Val Leu Ile Thr Asp Ile Leu Asp Thr
225 230 235 240
Phe Gly Lys Leu Val Tyr Glu Arg Ile Phe Ser Met Cys Val Asp Ser
245 250 255
Arg Ser Val Leu Pro Asp His Phe Ser Pro Glu Asn Ala Asn Asp Thr
260 265 270

Ala Lys Glu Thr Cys Leu Asn Trp Phe Phe Lys Ile Ala Ser Ile Arg
275 280 285
Glu Leu Ile Pro Arg Phe Tyr Val Glu Ala Ser Ile Leu Lys Cys Asn
290 295 300
Lys Phe Leu Ser Lys Thr Gly Ile Ser Glu Cys Leu Pro Arg Leu Thr
305 310 315 320
Cys Met Ile Arg Gly Ile Gly Asp Pro Leu Val Ser Val Tyr Ala Arg
325 330 335
Ala Tyr Leu Cys Arg Val Gly Met Glu Val Ala Pro His Leu Lys Glu
340 345 350
Thr Leu Asn Lys Asn Phe Phe Asp Phe Leu Leu Thr Phe Lys Gln Ile
355 360 365
His Gly Asp Thr Val Gln Asn Gln Leu Val Val Gln Gly Val Glu Leu
370 375 380
Pro Ser Tyr Leu Pro Leu Tyr Pro Pro Ala Met Asp Trp Ile Phe Gln
385 390 395 400
Cys Ile Ser Tyr His Ala Pro Glu Ala Leu Leu Thr Glu Met Met Glu
405 410 415
Arg Cys Lys Lys Leu Gly Asn Asn Ala Leu Leu Leu Asn Ser Val Met
420 425 430
Ser Ala Phe Arg Ala Glu Phe Ile Ala Thr Arg Ser Met Asp Phe Ile
435 440 445
Gly Met Ile Lys Glu Cys Asp Glu Ser Gly Phe Pro Lys His Leu Leu
450 455 460
Phe Arg Ser Leu Gly Leu Asn Leu Ala Leu Ala Asp Pro Pro Glu Ser
465 470 475 480
Asp Arg Leu Gln Ile Leu Asn Glu Ala Trp Lys Val Ile Thr Lys Leu
485 490 495
Lys Asn Pro Gln Asp Tyr Ile Asn Cys Ala Glu Val Trp Val Glu Tyr
500 505 510
Thr Cys Lys His Phe Thr Lys Arg Glu Val Asn Thr Val Leu Ala Asp
515 520 525
Val Ile Lys His Met Thr Pro Asp Arg Ala Phe Glu Asp Ser Tyr Pro
530 535 540
Gln Leu Gln Leu Ile Ile Lys Lys Val Ile Ala His Phe His Asp Phe
545 550 555 560
Ser Val Leu Phe Ser Val Glu Lys Phe Leu Pro Phe Leu Asp Met Phe
565 570 575
Gln Lys Glu Ser Val Arg Val Glu Val Cys Lys Cys Ile Met Asp Ala
580 585 590
Phe Ile Lys His Gln Gln Glu Pro Thr Lys Asp Pro Val Ile Leu Asn
595 600 605
Ala Leu Leu His Val Cys Lys Thr Met His Asp Ser Val Asn Ala Leu
610 615 620
Thr Leu Glu Asp Glu Lys Arg Met Leu Ser Tyr Leu Ile Asn Gly Phe
625 630 635 640
Ile Lys Met Val Ser Phe Gly Arg Asp Phe Glu Gln Gln Leu Ser Phe
645 650 655
Tyr Val Glu Ser Arg Ser Met Phe Cys Asn Leu Glu Pro Val Leu Val
660 665 670
Gln Leu Ile His Ser Val Asn Arg Leu Ala Met Glu Thr Arg Lys Val
675 680 685
Met Lys Gly Asn His Ser Arg Lys Thr Ala Ala Phe Val Arg Ala Cys
690 695 700
Val Ala Tyr Cys Phe Ile Thr Ile Pro Ser Leu Ala Gly Ile Phe Thr
705 710 715 720
Arg Leu Asn Leu Tyr Leu His Ser Gly Gln Val Ala Leu Ala Asn Gln
725 730 735
Cys Leu Ser Gln Ala Asp Ala Phe Phe Lys Ala Ala Ile Ser Leu Val
740 745 750
Pro Glu Val Pro Lys Met Ile Asn Ile Asp Gly Lys Met Arg Pro Ser
755 760 765
Glu Ser Phe Leu Leu Glu Phe Leu Cys Asn Phe Phe Ser Thr Leu Leu
770 775 780
Ile Val Pro Asp His Pro Glu His Gly Val Leu Phe Leu Val Arg Glu
785 790 795 800
Leu Leu Asn Val Ile Gln Asp Tyr Thr Trp Glu Asp Asn Ser Asp Glu
805 810 815
Lys Ile Arg Ile Tyr Thr Cys Val Leu His Leu Leu Ser Ala Met Ser

820 825 830
Gln Glu Thr Tyr Leu Tyr His Ile Asp Lys Val Asp Ser Asn Asp Ser
835 840 845
Leu Tyr Gly Gly Asp Ser Lys Phe Leu Ala Glu Asn Asn Lys Leu Cys
850 855 860
Glu Thr Val Met Ala Gln Ile Leu Glu His Leu Lys Thr Leu Ala Lys
865 870 875 880
Asp Glu Ala Leu Lys Arg Gln Ser Ser Leu Gly Leu Ser Phe Phe Asn
885 890 895
Ser Ile Leu Ala His Gly Asp Leu Arg Asn Asn Lys Leu Asn Gln Leu
900 905 910
Ser Val Asn Leu Trp His Leu Ala Gln Arg His Gly Cys Ala Asp Thr
915 920 925
Arg Thr Met Val Lys Thr Leu Glu Tyr Ile Lys Lys Gln Ser Lys Gln
930 935 940
Pro Asp Met Thr His Leu Thr Glu Leu Ala Leu Arg Leu Pro Leu Gln
945 950 955 960
Thr Arg Thr

<210> 195
<211> 494
<212> PRT
<213> Homo sapiens
<400> 195
Met Phe Glu Ile Lys Lys Ile Cys Cys Ile Gly Ala Gly Tyr Val Gly
1 5 10 15
Gly Pro Thr Cys Ser Val Ile Ala His Met Cys Pro Glu Ile Arg Val
20 25 30
Thr Val Val Asp Val Asn Glu Ser Arg Ile Asn Ala Trp Asn Ser Pro
35 40 45
Thr Leu Pro Ile Tyr Glu Pro Gly Leu Lys Glu Val Val Glu Ser Cys
50 55 60
Arg Gly Lys Asn Leu Phe Phe Ser Thr Asn Ile Asp Asp Ala Ile Lys
65 70 75 80
Glu Ala Asp Leu Val Phe Ile Ser Val Asn Thr Pro Thr Lys Thr Tyr
85 90 95
Gly Met Gly Lys Gly Arg Ala Ala Asp Leu Lys Tyr Ile Glu Ala Cys
100 105 110
Ala Arg Arg Ile Val Gln Asn Ser Asn Gly Tyr Lys Ile Val Thr Glu
115 120 125
Lys Ser Thr Val Pro Val Arg Ala Ala Glu Ser Ile Arg Arg Ile Phe
130 135 140
Asp Ala Asn Thr Lys Pro Asn Leu Asn Leu Gln Val Leu Ser Asn Pro
145 150 155 160
Glu Phe Leu Ala Glu Gly Thr Ala Ile Lys Asp Leu Lys Asn Pro Asp
165 170 175
Arg Val Leu Ile Gly Gly Asp Glu Thr Pro Glu Gly Gln Arg Ala Val
180 185 190
Gln Ala Leu Cys Ala Val Tyr Glu His Trp Val Pro Arg Glu Lys Ile
195 200 205
Leu Thr Thr Asn Thr Trp Ser Ser Glu Leu Ser Lys Leu Ala Ala Asn
210 215 220
Ala Phe Leu Ala Gln Arg Ile Ser Ser Ile Asn Ser Ile Ser Ala Leu
225 230 235 240
Cys Glu Ala Thr Gly Ala Asp Val Glu Glu Val Ala Thr Ala Ile Gly
245 250 255
Met Asp Gln Arg Ile Gly Asn Lys Phe Leu Lys Ala Ser Val Gly Phe
260 265 270
Gly Gly Ser Cys Phe Gln Lys Asp Val Leu Asn Leu Val Tyr Leu Cys
275 280 285
Glu Ala Leu Asn Leu Pro Glu Val Ala Arg Tyr Trp Gln Gln Val Ile
290 295 300
Asp Met Asn Asp Tyr Gln Arg Arg Arg Phe Ala Ser Arg Ile Ile Asp
305 310 315 320
Ser Leu Phe Asn Thr Val Thr Asp Lys Lys Ile Ala Ile Leu Gly Phe
325 330 335
Ala Phe Lys Lys Asp Thr Gly Asp Thr Arg Glu Ser Ser Ser Ile Tyr
340 345 350

```
Ile Ser Lys Tyr Leu Met Asp Glu Gly Ala His Leu His Ile Tyr Asp
        355                 360                 365
Pro Lys Val Pro Arg Glu Gln Ile Val Val Asp Leu Ser His Pro Gly
    370                 375                 380
Val Ser Glu Asp Asp Gln Val Ser Arg Leu Val Thr Ile Ser Lys Asp
385                 390                 395                 400
Pro Tyr Glu Ala Cys Asp Gly Ala His Ala Val Val Ile Cys Thr Glu
                405                 410                 415
Trp Asp Met Phe Lys Glu Leu Asp Tyr Glu Arg Ile His Lys Lys Met
            420                 425                 430
Leu Lys Pro Ala Phe Ile Phe Asp Gly Arg Arg Val Leu Asp Gly Leu
        435                 440                 445
His Asn Glu Leu Gln Thr Ile Gly Phe Gln Ile Glu Thr Ile Gly Lys
    450                 455                 460
Lys Val Ser Ser Lys Arg Ile Pro Tyr Ala Pro Ser Gly Glu Ile Pro
465                 470                 475                 480
Lys Phe Ser Leu Gln Asp Pro Pro Asn Lys Lys Pro Lys Val
                485                 490
```

<210> 196
<211> 205
<212> PRT
<213> Homo sapiens
<400> 196

```
Met Ala Leu Gln Leu Ser Arg Glu Gln Gly Ile Thr Leu Arg Gly Ser
1               5                   10                  15
Ala Glu Ile Val Ala Glu Phe Phe Ser Phe Gly Ile Asn Ser Ile Leu
            20                  25                  30
Tyr Gln Arg Gly Ile Tyr Pro Ser Glu Thr Phe Thr Arg Val Gln Lys
        35                  40                  45
Tyr Gly Leu Thr Leu Leu Val Thr Thr Asp Leu Glu Leu Ile Lys Tyr
    50                  55                  60
Leu Asn Asn Val Val Glu Gln Leu Lys Asp Trp Leu Tyr Lys Cys Ser
65                  70                  75                  80
Val Gln Lys Leu Val Val Val Ile Ser Asn Ile Glu Ser Gly Glu Val
                85                  90                  95
Leu Glu Arg Trp Gln Phe Asp Ile Glu Cys Asp Lys Thr Ala Lys Asp
            100                 105                 110
Asp Ser Ala Pro Arg Glu Lys Ser Gln Lys Ala Ile Gln Asp Glu Ile
        115                 120                 125
Arg Ser Val Ile Arg Gln Ile Thr Ala Thr Val Thr Phe Leu Pro Leu
    130                 135                 140
Leu Glu Val Ser Cys Ser Phe Asp Leu Leu Ile Tyr Thr Asp Lys Asp
145                 150                 155                 160
Leu Val Val Pro Glu Lys Trp Glu Glu Ser Gly Pro Gln Phe Ile Thr
                165                 170                 175
Asn Ser Glu Glu Val Arg Leu Arg Ser Phe Thr Thr Thr Ile His Lys
            180                 185                 190
Val Asn Ser Met Val Ala Tyr Lys Ile Pro Val Asn Asp
        195                 200                 205
```

<210> 197
<211> 427
<212> PRT
<213> Homo sapiens
<400> 197

```
Met Ala Pro Lys Lys Arg Pro Glu Thr Gln Lys Thr Ser Glu Ile Val
1               5                   10                  15
Leu Arg Pro Arg Asn Lys Arg Ser Arg Ser Pro Leu Glu Leu Glu Pro
            20                  25                  30
Glu Ala Lys Lys Leu Cys Ala Lys Gly Ser Gly Pro Ser Arg Arg Cys
        35                  40                  45
Asp Ser Asp Cys Leu Trp Val Gly Leu Ala Gly Pro Gln Ile Leu Pro
    50                  55                  60
Pro Cys Arg Ser Ile Val Arg Thr Leu His Gln His Lys Leu Gly Arg
65                  70                  75                  80
Ala Ser Trp Pro Ser Val Gln Gln Gly Leu Gln Gln Ser Phe Leu His
                85                  90                  95
Thr Leu Asp Ser Tyr Arg Ile Leu Gln Lys Ala Ala Pro Phe Asp Arg
```

```
                100                 105                 110
Arg Ala Thr Ser Leu Ala Trp His Pro Thr His Pro Ser Thr Val Ala
            115                 120                 125
Val Gly Ser Lys Gly Gly Asp Ile Met Leu Trp Asn Phe Gly Ile Lys
        130                 135                 140
Asp Lys Pro Thr Phe Ile Lys Gly Ile Gly Ala Gly Gly Ser Ile Thr
145                 150                 155                 160
Gly Leu Lys Phe Asn Pro Leu Asn Thr Asn Gln Phe Tyr Ala Ser Ser
                165                 170                 175
Met Glu Gly Thr Thr Arg Leu Gln Asp Phe Lys Gly Asn Ile Leu Arg
            180                 185                 190
Val Phe Ala Ser Ser Asp Thr Ile Asn Ile Trp Phe Cys Ser Leu Asp
        195                 200                 205
Val Ser Ala Ser Ser Arg Met Val Val Thr Gly Asp Asn Val Gly Asn
    210                 215                 220
Val Ile Leu Leu Asn Met Asp Gly Lys Glu Leu Trp Asn Leu Arg Met
225                 230                 235                 240
His Lys Lys Lys Val Thr His Val Ala Leu Asn Pro Cys Cys Asp Trp
                245                 250                 255
Phe Leu Ala Thr Ala Ser Val Asp Gln Thr Val Lys Ile Trp Asp Leu
            260                 265                 270
Arg Gln Val Arg Gly Lys Ala Ser Phe Leu Tyr Ser Leu Pro His Arg
        275                 280                 285
His Pro Val Asn Ala Ala Cys Phe Ser Pro Asp Gly Ala Arg Leu Leu
    290                 295                 300
Thr Thr Asp Gln Lys Ser Glu Ile Arg Val Tyr Ser Ala Ser Gln Trp
305                 310                 315                 320
Asp Cys Pro Leu Gly Leu Ile Pro His Pro His Arg His Phe Gln His
                325                 330                 335
Leu Thr Pro Ile Lys Ala Ala Trp His Pro Arg Tyr Asn Leu Ile Val
            340                 345                 350
Val Gly Arg Tyr Pro Asp Pro Asn Phe Lys Ser Cys Thr Pro Tyr Glu
        355                 360                 365
Leu Arg Thr Ile Asp Val Phe Asp Gly Asn Ser Gly Lys Met Met Cys
    370                 375                 380
Gln Leu Tyr Asp Pro Glu Ser Ser Gly Ile Ser Ser Leu Asn Glu Phe
385                 390                 395                 400
Asn Pro Met Gly Asp Thr Leu Ala Ser Ala Met Gly Tyr His Ile Leu
                405                 410                 415
Ile Trp Ser Gln Glu Glu Ala Arg Thr Arg Lys
            420                 425
```

<210> 198
<211> 283
<212> PRT
<213> Homo sapiens
<400> 198

```
Met Glu His Gly Ser Ile Ile Thr Gln Ala Arg Arg Glu Asp Ala Leu
1               5                   10                  15
Val Leu Thr Lys Gln Gly Leu Val Ser Lys Ser Ser Pro Lys Lys Pro
            20                  25                  30
Arg Gly Arg Asn Ile Phe Lys Ala Leu Phe Cys Cys Phe Arg Ala Gln
        35                  40                  45
His Val Gly Gln Ser Ser Ser Ser Thr Glu Leu Ala Ala Tyr Lys Glu
    50                  55                  60
Glu Ala Asn Thr Ile Ala Lys Ser Asp Leu Leu Gln Cys Leu Gln Tyr
65                  70                  75                  80
Gln Phe Tyr Gln Ile Pro Gly Thr Cys Leu Leu Pro Glu Val Thr Glu
                85                  90                  95
Glu Asp Gln Gly Arg Ile Cys Val Val Ile Asp Leu Asp Glu Thr Leu
            100                 105                 110
Val His Ser Ser Phe Lys Pro Ile Asn Asn Ala Asp Phe Ile Val Pro
        115                 120                 125
Ile Glu Ile Glu Gly Thr Thr His Gln Val Tyr Val Leu Lys Arg Pro
    130                 135                 140
Tyr Val Asp Glu Phe Leu Arg Arg Met Gly Glu Leu Phe Glu Cys Val
145                 150                 155                 160
Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp Pro Val Thr Asp Leu
                165                 170                 175
```

```
Leu Asp Arg Cys Gly Val Phe Arg Ala Arg Leu Phe Arg Glu Ser Cys
            180                 185                 190
Val Phe His Gln Gly Cys Tyr Val Lys Asp Leu Ser Arg Leu Gly Arg
        195                 200                 205
Asp Leu Arg Lys Thr Leu Ile Leu Asp Asn Ser Pro Ala Ser Tyr Ile
    210                 215                 220
Phe His Pro Glu Asn Ala Val Pro Val Gln Ser Trp Phe Asp Asp Met
225                 230                 235                 240
Ala Asp Thr Glu Leu Leu Asn Leu Ile Pro Ile Phe Glu Glu Leu Ser
                245                 250                 255
Gly Ala Glu Asp Val Tyr Thr Ser Leu Gly Ala Ala Ala Gly Pro Leu
            260                 265                 270
Ala Cys Pro Ala Ser Lys Arg Arg Pro Ser Gln
        275                 280
```

<210> 199
<211> 239
<212> PRT
<213> Homo sapiens
<400> 199

```
Met Ala His Ala Gly Arg Thr Gly Tyr Asp Asn Arg Glu Ile Val Met
1               5                   10                  15
Lys Tyr Ile His Tyr Lys Leu Ser Gln Arg Gly Tyr Glu Trp Asp Ala
            20                  25                  30
Gly Asp Val Gly Ala Ala Pro Pro Gly Ala Ala Pro Ala Pro Gly Ile
        35                  40                  45
Phe Ser Ser Gln Pro Gly His Thr Pro His Thr Ala Ala Ser Arg Asp
    50                  55                  60
Pro Val Ala Arg Thr Ser Pro Leu Gln Thr Pro Ala Ala Pro Gly Ala
65                  70                  75                  80
Ala Ala Gly Pro Ala Leu Ser Pro Val Pro Pro Val Val His Leu Thr
                85                  90                  95
Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg Arg Tyr Arg Arg Asp Phe
            100                 105                 110
Ala Glu Met Ser Arg Gln Leu His Leu Thr Pro Phe Thr Ala Arg Gly
        115                 120                 125
Arg Phe Ala Thr Val Val Glu Glu Leu Phe Arg Asp Gly Val Asn Trp
    130                 135                 140
Gly Arg Ile Val Ala Phe Phe Glu Phe Gly Gly Val Met Cys Val Glu
145                 150                 155                 160
Ser Val Asn Arg Glu Met Ser Pro Leu Val Asp Asn Ile Ala Leu Trp
                165                 170                 175
Met Thr Glu Tyr Leu Asn Arg His Leu His Thr Trp Ile Gln Asp Asn
            180                 185                 190
Gly Gly Trp Asp Ala Phe Val Glu Leu Tyr Gly Pro Ser Met Arg Pro
        195                 200                 205
Leu Phe Asp Phe Ser Trp Leu Ser Leu Lys Thr Leu Leu Ser Leu Ala
    210                 215                 220
Leu Val Gly Ala Cys Ile Thr Leu Gly Ala Tyr Leu Gly His Lys
225                 230                 235
```

<210> 200
<211> 751
<212> PRT
<213> Homo sapiens
<400> 200

```
Met Ala Phe Arg Thr Ile Cys Val Leu Val Gly Val Phe Ile Cys Ser
1               5                   10                  15
Ile Cys Val Lys Gly Ser Ser Gln Pro Gln Ala Arg Val Tyr Leu Thr
            20                  25                  30
Phe Asp Glu Leu Arg Glu Thr Lys Thr Ser Glu Tyr Phe Ser Leu Ser
        35                  40                  45
His His Pro Leu Asp Tyr Arg Ile Leu Leu Met Asp Glu Asp Gln Asp
    50                  55                  60
Arg Ile Tyr Val Gly Ser Lys Asp His Ile Leu Ser Leu Asn Ile Asn
65                  70                  75                  80
Asn Ile Ser Gln Glu Ala Leu Ser Val Phe Trp Pro Ala Ser Thr Ile
                85                  90                  95
Lys Val Glu Glu Cys Lys Met Ala Gly Lys Asp Pro Thr His Gly Cys
```

```
                100                 105                 110
Gly Asn Phe Val Arg Val Ile Gln Thr Phe Asn Arg Thr His Leu Tyr
            115                 120                 125
Val Cys Gly Ser Gly Ala Phe Ser Pro Val Cys Thr Tyr Leu Asn Arg
    130                 135                 140
Gly Arg Arg Ser Glu Asp Gln Val Phe Met Ile Asp Ser Lys Cys Glu
145                 150                 155                 160
Ser Gly Lys Gly Arg Cys Ser Phe Asn Pro Asn Val Asn Thr Val Ser
                165                 170                 175
Val Met Ile Asn Glu Glu Leu Phe Ser Gly Met Tyr Ile Asp Phe Met
            180                 185                 190
Gly Thr Asp Ala Ala Ile Phe Arg Ser Leu Thr Lys Arg Asn Ala Val
        195                 200                 205
Arg Thr Asp Gln His Asn Ser Lys Trp Leu Ser Glu Pro Met Phe Val
    210                 215                 220
Asp Ala His Val Ile Pro Asp Gly Thr Asp Pro Asn Asp Ala Lys Val
225                 230                 235                 240
Tyr Phe Phe Phe Lys Glu Lys Leu Thr Asp Asn Asn Arg Ser Thr Lys
                245                 250                 255
Gln Ile His Ser Met Ile Ala Arg Ile Cys Pro Asn Asp Thr Gly Gly
            260                 265                 270
Leu Arg Ser Leu Val Asn Lys Trp Thr Thr Phe Leu Lys Ala Arg Leu
        275                 280                 285
Val Cys Ser Val Thr Asp Glu Asp Gly Pro Glu Thr His Phe Asp Glu
    290                 295                 300
Leu Glu Asp Val Phe Leu Leu Glu Thr Asp Asn Pro Arg Thr Thr Leu
305                 310                 315                 320
Val Tyr Gly Ile Phe Thr Thr Ser Ser Ser Val Phe Lys Gly Ser Ala
                325                 330                 335
Val Cys Val Tyr His Leu Ser Asp Ile Gln Thr Val Phe Asn Gly Pro
            340                 345                 350
Phe Ala His Lys Glu Gly Pro Asn His Gln Leu Ile Ser Tyr Gln Gly
        355                 360                 365
Arg Ile Pro Tyr Pro Arg Pro Gly Thr Cys Pro Gly Gly Ala Phe Thr
    370                 375                 380
Pro Asn Met Arg Thr Thr Lys Glu Phe Pro Asp Asp Val Val Thr Phe
385                 390                 395                 400
Ile Arg Asn His Pro Leu Met Tyr Asn Ser Ile Tyr Pro Ile His Lys
                405                 410                 415
Arg Pro Leu Ile Val Arg Ile Gly Thr Asp Tyr Lys Tyr Thr Lys Ile
            420                 425                 430
Ala Val Asp Arg Val Asn Ala Ala Asp Gly Arg Tyr His Val Leu Phe
        435                 440                 445
Leu Gly Thr Asp Arg Gly Thr Val Gln Lys Val Val Val Leu Pro Thr
    450                 455                 460
Asn Asn Ser Val Ser Gly Glu Leu Ile Leu Glu Glu Leu Glu Val Phe
465                 470                 475                 480
Lys Asn His Ala Pro Ile Thr Thr Met Lys Ile Ser Ser Lys Lys Gln
                485                 490                 495
Gln Leu Tyr Val Ser Ser Asn Glu Gly Val Ser Gln Val Ser Leu His
            500                 505                 510
Arg Cys His Ile Tyr Gly Thr Ala Cys Ala Asp Cys Cys Leu Ala Arg
        515                 520                 525
Asp Pro Tyr Cys Ala Trp Asp Gly His Ser Cys Ser Arg Phe Tyr Pro
    530                 535                 540
Thr Gly Lys Arg Arg Ser Arg Arg Gln Asp Val Arg His Gly Asn Pro
545                 550                 555                 560
Leu Thr Gln Cys Arg Gly Phe Asn Leu Lys Ala Tyr Arg Asn Ala Ala
                565                 570                 575
Glu Ile Val Gln Tyr Gly Val Lys Asn Asn Thr Thr Phe Leu Glu Cys
            580                 585                 590
Ala Pro Lys Ser Pro Gln Ala Ser Ile Lys Trp Leu Leu Gln Lys Asp
        595                 600                 605
Lys Asp Arg Arg Lys Glu Val Lys Leu Asn Glu Arg Ile Ile Ala Thr
    610                 615                 620
Ser Gln Gly Leu Leu Ile Arg Ser Val Gln Gly Ser Asp Gln Gly Leu
625                 630                 635                 640
Tyr His Cys Ile Ala Thr Glu Asn Ser Phe Lys Gln Thr Ile Ala Lys
                645                 650                 655
```

```
Ile Asn Phe Lys Val Leu Asp Ser Glu Met Val Ala Val Val Thr Asp
            660                 665                 670
Lys Trp Ser Pro Trp Thr Trp Ala Ser Ser Val Arg Ala Leu Pro Phe
        675                 680                 685
His Pro Lys Asp Ile Met Gly Ala Phe Ser His Ser Glu Met Gln Met
    690                 695                 700
Ile Asn Gln Tyr Cys Lys Asp Thr Arg Gln Gln His Gln Gln Gly Asp
705                 710                 715                 720
Glu Ser Gln Lys Met Arg Gly Asp Tyr Gly Lys Leu Lys Ala Leu Ile
                725                 730                 735
Asn Ser Arg Lys Ser Arg Asn Arg Arg Asn Gln Leu Pro Glu Ser
            740                 745                 750
```

<210> 201
<211> 208
<212> PRT
<213> Homo sapiens
<400> 201

```
Met Lys Leu Leu Pro Ser Val Val Leu Lys Leu Phe Leu Ala Ala Val
1               5                   10                  15
Leu Ser Ala Leu Val Thr Gly Glu Ser Leu Glu Arg Leu Arg Arg Gly
            20                  25                  30
Leu Ala Ala Gly Thr Ser Asn Pro Asp Pro Pro Thr Val Ser Thr Asp
        35                  40                  45
Gln Leu Leu Pro Leu Gly Gly Gly Arg Asp Arg Lys Val Arg Asp Leu
    50                  55                  60
Gln Glu Ala Asp Leu Asp Leu Leu Arg Val Thr Leu Ser Ser Lys Pro
65                  70                  75                  80
Gln Ala Leu Ala Thr Pro Asn Lys Glu Glu His Gly Lys Arg Lys Lys
                85                  90                  95
Lys Gly Lys Gly Leu Gly Lys Lys Arg Asp Pro Cys Leu Arg Lys Tyr
            100                 105                 110
Lys Asp Phe Cys Ile His Gly Glu Cys Lys Tyr Val Lys Glu Leu Arg
        115                 120                 125
Ala Pro Ser Cys Ile Cys His Pro Gly Tyr His Gly Glu Arg Cys His
    130                 135                 140
Gly Leu Ser Leu Pro Val Glu Asn Arg Leu Tyr Thr Tyr Asp His Thr
145                 150                 155                 160
Thr Ile Leu Ala Val Val Ala Val Val Leu Ser Ser Val Cys Leu Leu
                165                 170                 175
Val Ile Val Gly Leu Leu Met Phe Arg Tyr His Arg Arg Gly Gly Tyr
            180                 185                 190
Asp Val Glu Asn Glu Glu Lys Val Lys Leu Gly Met Thr Asn Ser His
        195                 200                 205
```

<210> 202
<211> 662
<212> PRT
<213> Homo sapiens
<400> 202

```
Met Arg Pro Gln Ile Leu Leu Leu Leu Ala Leu Leu Thr Leu Gly Leu
1               5                   10                  15
Ala Ala Gln His Gln Asp Lys Val Pro Cys Lys Met Val Asp Lys Lys
            20                  25                  30
Val Ser Cys Gln Val Leu Gly Leu Leu Gln Val Pro Ser Val Leu Pro
        35                  40                  45
Pro Asp Thr Glu Thr Leu Asp Leu Ser Gly Asn Gln Leu Arg Ser Ile
    50                  55                  60
Leu Ala Ser Pro Leu Gly Phe Tyr Thr Ala Leu Arg His Leu Asp Leu
65                  70                  75                  80
Ser Thr Asn Glu Ile Ser Phe Leu Gln Pro Gly Ala Phe Gln Ala Leu
                85                  90                  95
Thr His Leu Glu His Leu Ser Leu Ala His Asn Arg Leu Ala Met Ala
            100                 105                 110
Thr Ala Leu Ser Ala Gly Gly Leu Gly Pro Leu Pro Arg Val Thr Ser
        115                 120                 125
Leu Asp Leu Ser Gly Asn Ser Leu Tyr Ser Gly Leu Leu Glu Arg Leu
    130                 135                 140
Leu Gly Glu Ala Pro Ser Leu His Thr Leu Ser Leu Ala Glu Asn Ser
```

145 150 155 160
Leu Thr Arg Leu Thr Arg His Thr Phe Arg Asp Met Pro Ala Leu Glu
165 170 175
Gln Leu Asp Leu His Ser Asn Val Leu Met Asp Ile Glu Asp Gly Ala
180 185 190
Phe Glu Gly Leu Pro Arg Leu Thr His Leu Asn Leu Ser Arg Asn Ser
195 200 205
Leu Thr Cys Ile Ser Asp Phe Ser Leu Gln Gln Leu Arg Val Leu Asp
210 215 220
Leu Ser Cys Asn Ser Ile Glu Ala Phe Gln Thr Ala Ser Gln Pro Gln
225 230 235 240
Ala Glu Phe Gln Leu Thr Trp Leu Asp Leu Arg Glu Asn Lys Leu Leu
245 250 255
His Phe Pro Asp Leu Ala Ala Leu Pro Arg Leu Ile Tyr Leu Asn Leu
260 265 270
Ser Asn Asn Leu Ile Arg Leu Pro Thr Gly Pro Pro Gln Asp Ser Lys
275 280 285
Gly Ile His Ala Pro Ser Glu Gly Trp Ser Ala Leu Pro Leu Ser Ala
290 295 300
Pro Ser Gly Asn Ala Ser Gly Arg Pro Leu Ser Gln Leu Leu Asn Leu
305 310 315 320
Asp Leu Ser Tyr Asn Glu Ile Glu Leu Ile Pro Asp Ser Phe Leu Glu
325 330 335
His Leu Thr Ser Leu Cys Phe Leu Asn Leu Ser Arg Asn Cys Leu Arg
340 345 350
Thr Phe Glu Ala Arg Arg Leu Gly Ser Leu Pro Cys Leu Met Leu Leu
355 360 365
Asp Leu Ser His Asn Ala Leu Glu Thr Leu Glu Leu Gly Ala Arg Ala
370 375 380
Leu Gly Ser Leu Arg Thr Leu Leu Leu Gln Gly Asn Ala Leu Arg Asp
385 390 395 400
Leu Pro Pro Tyr Thr Phe Ala Asn Leu Ala Ser Leu Gln Arg Leu Asn
405 410 415
Leu Gln Gly Asn Arg Val Ser Pro Cys Gly Gly Pro Asp Glu Pro Gly
420 425 430
Pro Ser Gly Cys Val Ala Phe Ser Gly Ile Thr Ser Leu Arg Ser Leu
435 440 445
Ser Leu Val Asp Asn Glu Ile Glu Leu Leu Arg Ala Gly Ala Phe Leu
450 455 460
His Thr Pro Leu Thr Glu Leu Asp Leu Ser Ser Asn Pro Gly Leu Glu
465 470 475 480
Val Ala Thr Gly Ala Leu Gly Gly Leu Glu Ala Ser Leu Glu Val Leu
485 490 495
Ala Leu Gln Gly Asn Gly Leu Met Val Leu Gln Val Asp Leu Pro Cys
500 505 510
Phe Ile Cys Leu Lys Arg Leu Asn Leu Ala Glu Asn Arg Leu Ser His
515 520 525
Leu Pro Ala Trp Thr Gln Ala Val Ser Leu Glu Val Leu Asp Leu Arg
530 535 540
Asn Asn Ser Phe Ser Leu Leu Pro Gly Ser Ala Met Gly Gly Leu Glu
545 550 555 560
Thr Ser Leu Arg Arg Leu Tyr Leu Gln Gly Asn Pro Leu Ser Cys Cys
565 570 575
Gly Asn Gly Trp Leu Ala Ala Gln Leu His Gln Gly Arg Val Asp Val
580 585 590
Asp Ala Thr Gln Asp Leu Ile Cys Arg Phe Ser Ser Gln Glu Glu Val
595 600 605
Ser Leu Ser His Val Arg Pro Glu Asp Cys Glu Lys Gly Gly Leu Lys
610 615 620
Asn Ile Asn Leu Ile Ile Ile Leu Thr Phe Ile Leu Val Ser Ala Ile
625 630 635 640
Leu Leu Thr Thr Leu Ala Ala Cys Cys Cys Val Arg Arg Gln Lys Phe
645 650 655
Asn Gln Gln Tyr Lys Ala
660

<210> 203
<211> 1036
<212> PRT

<213> Homo sapiens
<400> 203

Met Gln Pro Glu Glu Gly Thr Gly Trp Leu Leu Glu Leu Leu Ser Glu
1 5 10 15
Val Gln Leu Gln Gln Tyr Phe Leu Arg Leu Arg Asp Asp Leu Asn Val
20 25 30
Thr Arg Leu Ser His Phe Glu Tyr Val Lys Asn Glu Asp Leu Glu Lys
35 40 45
Ile Gly Met Gly Arg Pro Gly Gln Arg Arg Leu Trp Glu Ala Val Lys
50 55 60
Arg Arg Lys Ala Leu Cys Lys Arg Lys Ser Trp Met Ser Lys Val Phe
65 70 75 80
Ser Gly Lys Arg Leu Glu Ala Glu Phe Pro Pro His His Ser Gln Ser
85 90 95
Thr Phe Arg Lys Thr Ser Pro Ala Pro Gly Gly Pro Ala Gly Glu Gly
100 105 110
Pro Leu Gln Ser Leu Thr Cys Leu Ile Gly Glu Lys Asp Leu Arg Leu
115 120 125
Leu Glu Lys Leu Gly Asp Gly Ser Phe Gly Val Val Arg Arg Gly Glu
130 135 140
Trp Asp Ala Pro Ser Gly Lys Thr Val Ser Val Ala Val Lys Cys Leu
145 150 155 160
Lys Pro Asp Val Leu Ser Gln Pro Glu Ala Met Asp Asp Phe Ile Arg
165 170 175
Glu Val Asn Ala Met His Ser Leu Asp His Arg Asn Leu Ile Arg Leu
180 185 190
Tyr Gly Val Val Leu Thr Pro Pro Met Lys Met Val Thr Glu Leu Ala
195 200 205
Pro Leu Gly Ser Leu Leu Asp Arg Leu Arg Lys His Gln Gly His Phe
210 215 220
Leu Leu Gly Thr Leu Ser Arg Tyr Ala Val Gln Val Ala Glu Gly Met
225 230 235 240
Gly Tyr Leu Glu Ser Lys Arg Phe Ile His Arg Asp Leu Ala Ala Arg
245 250 255
Asn Leu Leu Leu Ala Thr Arg Asp Leu Val Lys Ile Gly Asp Phe Gly
260 265 270
Leu Met Arg Ala Leu Pro Gln Asn Asp Asp His Tyr Val Met Gln Glu
275 280 285
His Arg Lys Val Pro Phe Ala Trp Cys Ala Pro Glu Ser Leu Lys Thr
290 295 300
Arg Thr Phe Ser His Ala Ser Asp Thr Trp Met Phe Gly Val Thr Leu
305 310 315 320
Trp Glu Met Phe Thr Tyr Gly Gln Glu Pro Trp Ile Gly Leu Asn Gly
325 330 335
Ser Gln Ile Leu His Lys Ile Asp Lys Glu Gly Glu Arg Leu Pro Arg
340 345 350
Pro Glu Asp Cys Pro Gln Asp Ile Tyr Asn Val Met Val Gln Cys Trp
355 360 365
Ala His Lys Pro Glu Asp Arg Pro Thr Phe Val Ala Leu Arg Asp Phe
370 375 380
Leu Leu Glu Ala Gln Pro Thr Asp Met Arg Ala Leu Gln Asp Phe Glu
385 390 395 400
Glu Pro Asp Lys Leu His Ile Gln Met Asn Asp Val Ile Thr Val Ile
405 410 415
Glu Gly Arg Ala Glu Asn Tyr Trp Trp Arg Gly Gln Asn Thr Arg Thr
420 425 430
Leu Cys Val Gly Pro Phe Pro Arg Asn Val Val Thr Ser Val Ala Gly
435 440 445
Leu Ser Ala Gln Asp Ile Ser Gln Pro Leu Gln Asn Ser Phe Ile His
450 455 460
Thr Gly His Gly Asp Ser Asp Pro Arg His Cys Trp Gly Phe Pro Asp
465 470 475 480
Arg Ile Asp Glu Leu Tyr Leu Gly Asn Pro Met Asp Pro Pro Asp Leu
485 490 495
Leu Ser Val Glu Leu Ser Thr Ser Arg Pro Pro Gln His Leu Gly Gly
500 505 510
Val Lys Lys Pro Thr Tyr Asp Pro Val Ser Glu Asp Gln Asp Pro Leu
515 520 525
Ser Ser Asp Phe Lys Arg Leu Gly Leu Arg Lys Pro Gly Leu Pro Arg

530 535 540
Gly Leu Trp Leu Ala Lys Pro Ser Ala Arg Val Pro Gly Thr Lys Ala
545 550 555 560
Ser Arg Gly Ser Gly Ala Glu Val Thr Leu Ile Asp Phe Gly Glu Glu
565 570 575
Pro Val Val Pro Ala Leu Arg Pro Cys Pro Pro Ser Leu Ala Gln Leu
580 585 590
Ala Met Asp Ala Cys Ser Leu Leu Asp Glu Thr Pro Pro Gln Ser Pro
595 600 605
Thr Arg Ala Leu Pro Arg Pro Leu His Pro Thr Pro Val Val Asp Trp
610 615 620
Asp Ala Arg Pro Leu Pro Pro Pro Pro Ala Tyr Asp Asp Val Ala Gln
625 630 635 640
Asp Glu Asp Asp Phe Glu Ile Cys Ser Ile Asn Ser Thr Leu Val Gly
645 650 655
Ala Gly Val Pro Ala Gly Pro Ser Gln Gly Gln Thr Asn Tyr Ala Phe
660 665 670
Val Pro Glu Gln Ala Arg Pro Pro Pro Pro Leu Glu Asp Asn Leu Phe
675 680 685
Leu Pro Pro Gln Gly Gly Gly Lys Pro Pro Ser Ser Ala Gln Thr Ala
690 695 700
Glu Ile Phe Gln Ala Leu Gln Gln Glu Cys Met Arg Gln Leu Gln Ala
705 710 715 720
Pro Gly Ser Pro Ala Pro Ser Pro Ser Pro Gly Gly Asp Asp Lys Pro
725 730 735
Gln Val Pro Pro Arg Val Pro Ile Pro Pro Arg Pro Thr Arg Pro His
740 745 750
Val Gln Leu Ser Pro Ala Pro Pro Gly Glu Glu Glu Thr Ser Gln Trp
755 760 765
Pro Gly Pro Ala Ser Pro Pro Arg Val Pro Pro Arg Glu Pro Leu Ser
770 775 780
Pro Gln Gly Ser Arg Thr Pro Ser Pro Leu Val Pro Pro Gly Ser Ser
785 790 795 800
Pro Leu Pro Pro Arg Leu Ser Ser Ser Pro Gly Lys Thr Met Pro Thr
805 810 815
Thr Gln Ser Phe Ala Ser Asp Pro Lys Tyr Ala Thr Pro Gln Val Ile
820 825 830
Gln Ala Pro Gly Ala Gly Gly Pro Cys Ile Leu Pro Ile Val Arg Asp
835 840 845
Gly Lys Lys Val Ser Ser Thr His Tyr Tyr Leu Leu Pro Glu Arg Pro
850 855 860
Ser Tyr Leu Glu Arg Tyr Gln Arg Phe Leu Arg Glu Ala Gln Ser Pro
865 870 875 880
Glu Glu Pro Thr Pro Leu Pro Val Pro Leu Leu Leu Pro Pro Pro Ser
885 890 895
Thr Pro Ala Pro Ala Ala Pro Thr Ala Thr Val Arg Pro Met Pro Gln
900 905 910
Ala Ala Leu Asp Pro Lys Ala Asn Phe Ser Thr Asn Asn Ser Asn Pro
915 920 925
Gly Ala Arg Pro Pro Pro Pro Arg Ala Thr Ala Arg Leu Pro Gln Arg
930 935 940
Gly Cys Pro Gly Asp Gly Pro Glu Ala Gly Arg Pro Ala Asp Lys Ile
945 950 955 960
Gln Met Ala Met Val His Gly Val Thr Thr Glu Glu Cys Gln Ala Ala
965 970 975
Leu Gln Cys His Gly Trp Ser Val Gln Arg Ala Ala Gln Tyr Leu Lys
980 985 990
Val Glu Gln Leu Phe Gly Leu Gly Leu Arg Pro Arg Gly Glu Cys His
995 1000 1005
Lys Val Leu Glu Met Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys
1010 1015 1020
His Leu Leu Gly Ser Trp Gly Pro Ala His His Lys Arg
1025 1030 1035

<210> 204
<211> 364
<212> PRT
<213> Homo sapiens
<400> 204

```
Met Ala Ala Ile Ser Thr Ser Ile Pro Val Ile Ser Gln Pro Gln Phe
1               5                  10                  15
Thr Ala Met Asn Glu Pro Gln Cys Phe Tyr Asn Glu Ser Ile Ala Phe
            20                  25                  30
Phe Tyr Asn Arg Ser Gly Lys His Leu Ala Thr Glu Trp Asn Thr Val
        35                  40                  45
Ser Lys Leu Val Met Gly Leu Gly Ile Thr Val Cys Ile Phe Ile Met
    50                  55                  60
Leu Ala Asn Leu Leu Val Met Val Ala Ile Tyr Val Asn Arg Arg Phe
65                  70                  75                  80
His Phe Pro Ile Tyr Tyr Leu Met Ala Asn Leu Ala Ala Ala Asp Phe
                85                  90                  95
Phe Ala Gly Leu Ala Tyr Phe Tyr Leu Met Phe Asn Thr Gly Pro Asn
            100                 105                 110
Thr Arg Arg Leu Thr Val Ser Thr Trp Leu Leu Arg Gln Gly Leu Ile
        115                 120                 125
Asp Thr Ser Leu Thr Ala Ser Val Ala Asn Leu Leu Ala Ile Ala Ile
    130                 135                 140
Glu Arg His Ile Thr Val Phe Arg Met Gln Leu His Thr Arg Met Ser
145                 150                 155                 160
Asn Arg Arg Val Val Val Val Ile Val Val Ile Trp Thr Met Ala Ile
                165                 170                 175
Val Met Gly Ala Ile Pro Ser Val Gly Trp Asn Cys Ile Cys Asp Ile
            180                 185                 190
Glu Asn Cys Ser Asn Met Ala Pro Leu Tyr Ser Asp Ser Tyr Leu Val
        195                 200                 205
Phe Trp Ala Ile Phe Asn Leu Val Thr Phe Val Val Met Val Val Leu
    210                 215                 220
Tyr Ala His Ile Phe Gly Tyr Val Arg Gln Arg Thr Met Arg Met Ser
225                 230                 235                 240
Arg His Ser Ser Gly Pro Arg Arg Asn Arg Asp Thr Met Met Ser Leu
                245                 250                 255
Leu Lys Thr Val Val Ile Val Leu Gly Ala Phe Ile Ile Cys Trp Thr
            260                 265                 270
Pro Gly Leu Val Leu Leu Leu Leu Asp Val Cys Cys Pro Gln Cys Asp
        275                 280                 285
Val Leu Ala Tyr Glu Lys Phe Phe Leu Leu Leu Ala Glu Phe Asn Ser
    290                 295                 300
Ala Met Asn Pro Ile Ile Tyr Ser Tyr Arg Asp Lys Glu Met Ser Ala
305                 310                 315                 320
Thr Phe Arg Gln Ile Leu Cys Cys Gln Arg Ser Glu Asn Pro Thr Gly
                325                 330                 335
Pro Thr Glu Gly Ser Asp Arg Ser Ala Ser Ser Leu Asn His Thr Ile
            340                 345                 350
Leu Ala Gly Val His Ser Asn Asp His Ser Val Val
        355                 360
```

<210> 205
<211> 164
<212> PRT
<213> Homo sapiens
<400> 205

```
Met Ala Ser Pro His Gln Glu Pro Lys Pro Gly Asp Leu Ile Glu Ile
1               5                  10                  15
Phe Arg Leu Gly Tyr Glu His Trp Ala Leu Tyr Ile Gly Asp Gly Tyr
            20                  25                  30
Val Ile His Leu Ala Pro Pro Ser Glu Tyr Pro Gly Ala Gly Ser Ser
        35                  40                  45
Ser Val Phe Ser Val Leu Ser Asn Ser Ala Glu Val Lys Arg Gly Arg
    50                  55                  60
Leu Glu Asp Val Val Gly Gly Cys Cys Tyr Arg Val Asn Asn Ser Leu
65                  70                  75                  80
Asp His Glu Tyr Gln Pro Arg Pro Val Glu Val Ile Ile Ser Ser Ala
                85                  90                  95
Lys Glu Met Val Gly Gln Lys Met Lys Tyr Ser Ile Val Ser Arg Asn
            100                 105                 110
Cys Glu His Phe Val Ala Gln Leu Arg Tyr Gly Lys Ser Arg Cys Lys
        115                 120                 125
Gln Val Glu Lys Ala Lys Val Glu Val Gly Val Ala Thr Ala Leu Gly
```

130 135 140
Ile Leu Val Val Ala Gly Cys Ser Phe Ala Ile Arg Arg Tyr Gln Lys
145 150 155 160
Lys Ala Thr Ala

<210> 206
<211> 323
<212> PRT
<213> Homo sapiens
<400> 206
Met Tyr His Asn Ser Ser Gln Lys Arg His Trp Thr Phe Ser Ser Glu
1 5 10 15
Glu Gln Leu Ala Arg Leu Arg Ala Asp Ala Asn Arg Lys Phe Arg Cys
20 25 30
Lys Ala Val Ala Asn Gly Lys Val Leu Pro Asn Asp Pro Val Phe Leu
35 40 45
Glu Pro His Glu Glu Met Thr Leu Cys Lys Tyr Tyr Glu Lys Arg Leu
50 55 60
Leu Glu Phe Cys Ser Val Phe Lys Pro Ala Met Pro Arg Ser Val Val
65 70 75 80
Gly Thr Ala Cys Met Tyr Phe Lys Arg Phe Tyr Leu Asn Asn Ser Val
85 90 95
Met Glu Tyr His Pro Arg Ile Ile Met Leu Thr Cys Ala Phe Leu Ala
100 105 110
Cys Lys Val Asp Glu Phe Asn Val Ser Ser Pro Gln Phe Val Gly Asn
115 120 125
Leu Arg Glu Ser Pro Leu Gly Gln Glu Lys Ala Leu Glu Gln Ile Leu
130 135 140
Glu Tyr Glu Leu Leu Leu Ile Gln Gln Leu Asn Phe His Leu Ile Val
145 150 155 160
His Asn Pro Tyr Arg Pro Phe Glu Gly Phe Leu Ile Asp Leu Lys Thr
165 170 175
Arg Tyr Pro Ile Leu Glu Asn Pro Glu Ile Leu Arg Lys Thr Ala Asp
180 185 190
Asp Phe Leu Asn Arg Ile Ala Leu Thr Asp Ala Tyr Leu Leu Tyr Thr
195 200 205
Pro Ser Gln Ile Ala Leu Thr Ala Ile Leu Ser Ser Ala Ser Arg Ala
210 215 220
Gly Ile Thr Met Glu Ser Tyr Leu Ser Glu Ser Leu Met Leu Lys Glu
225 230 235 240
Asn Arg Thr Cys Leu Ser Gln Leu Leu Asp Ile Met Lys Ser Met Arg
245 250 255
Asn Leu Val Lys Lys Tyr Glu Pro Pro Arg Ser Glu Glu Val Ala Val
260 265 270
Leu Lys Gln Lys Leu Glu Arg Cys His Ser Ala Glu Leu Ala Leu Asn
275 280 285
Val Ile Thr Lys Lys Arg Lys Gly Tyr Glu Asp Asp Asp Tyr Val Ser
290 295 300
Lys Lys Ser Lys His Glu Glu Glu Glu Trp Thr Asp Asp Asp Leu Val
305 310 315 320
Glu Ser Leu

<210> 207
<211> 710
<212> PRT
<213> Homo sapiens
<400> 207
Met Leu Ser Phe Gln Tyr Pro Asp Val Tyr Arg Asp Glu Thr Ala Val
1 5 10 15
Gln Asp Tyr His Gly His Lys Ile Cys Asp Pro Tyr Ala Trp Leu Glu
20 25 30
Asp Pro Asp Ser Glu Gln Thr Lys Ala Phe Val Glu Ala Gln Asn Lys
35 40 45
Ile Thr Val Pro Phe Leu Glu Gln Cys Pro Ile Arg Gly Leu Tyr Lys
50 55 60
Glu Arg Met Thr Glu Leu Tyr Asp Tyr Pro Lys Tyr Ser Cys His Phe
65 70 75 80

Lys Lys Gly Lys Arg Tyr Phe Tyr Phe Tyr Asn Thr Gly Leu Gln Asn
85 90 95
Gln Arg Val Leu Tyr Val Gln Asp Ser Leu Glu Gly Glu Ala Arg Val
100 105 110
Phe Leu Asp Pro Asn Ile Leu Ser Asp Asp Gly Thr Val Ala Leu Arg
115 120 125
Gly Tyr Ala Phe Ser Glu Asp Gly Glu Tyr Phe Ala Tyr Gly Leu Ser
130 135 140
Ala Ser Gly Ser Asp Trp Val Thr Ile Lys Phe Met Lys Val Asp Gly
145 150 155 160
Ala Lys Glu Leu Pro Asp Val Leu Glu Arg Val Lys Phe Ser Cys Met
165 170 175
Ala Trp Thr His Asp Gly Lys Gly Met Phe Tyr Asn Ser Tyr Pro Gln
180 185 190
Gln Asp Gly Lys Ser Asp Gly Thr Glu Thr Ser Thr Asn Leu His Gln
195 200 205
Lys Leu Tyr Tyr His Val Leu Gly Thr Asp Gln Ser Glu Asp Ile Leu
210 215 220
Cys Ala Glu Phe Pro Asp Glu Pro Lys Trp Met Gly Gly Ala Glu Leu
225 230 235 240
Ser Asp Asp Gly Arg Tyr Val Leu Leu Ser Ile Arg Glu Gly Cys Asp
245 250 255
Pro Val Asn Arg Leu Trp Tyr Cys Asp Leu Gln Gln Glu Ser Ser Gly
260 265 270
Ile Ala Gly Ile Leu Lys Trp Val Lys Leu Ile Asp Asn Phe Glu Gly
275 280 285
Glu Tyr Asp Tyr Val Thr Asn Glu Gly Ala Val Phe Thr Phe Lys Thr
290 295 300
Asn Arg Gln Ser Pro Asn Tyr Arg Val Ile Asn Ile Asp Phe Arg Asp
305 310 315 320
Pro Glu Glu Ser Lys Trp Lys Val Leu Val Pro Glu His Glu Lys Asp
325 330 335
Val Leu Glu Trp Ile Ala Cys Val Arg Ser Asn Phe Leu Val Leu Cys
340 345 350
Tyr Leu His Asp Val Lys Asn Ile Leu Gln Leu His Asp Leu Thr Thr
355 360 365
Gly Ala Leu Leu Lys Thr Phe Pro Leu Asp Val Gly Ser Ile Val Gly
370 375 380
Tyr Ser Gly Gln Lys Lys Asp Thr Glu Ile Phe Tyr Gln Phe Thr Ser
385 390 395 400
Phe Leu Ser Pro Gly Ile Ile Tyr His Cys Asp Leu Thr Lys Glu Glu
405 410 415
Leu Glu Pro Arg Val Phe Arg Glu Val Thr Val Lys Gly Ile Asp Ala
420 425 430
Ser Asp Tyr Gln Thr Val Gln Ile Phe Tyr Pro Ser Lys Asp Gly Thr
435 440 445
Lys Ile Pro Met Phe Ile Val His Lys Lys Ser Ile Lys Leu Asp Gly
450 455 460
Ser His Pro Ala Phe Leu Tyr Gly Tyr Gly Gly Phe Asn Ile Ser Ile
465 470 475 480
Thr Pro Asn Tyr Ser Val Ser Arg Leu Ile Phe Val Arg His Met Gly
485 490 495
Gly Ile Leu Ala Val Ala Asn Ile Arg Gly Gly Gly Glu Tyr Gly Glu
500 505 510
Thr Trp His Lys Gly Gly Ile Leu Ala Asn Lys Gln Asn Cys Phe Asp
515 520 525
Asp Phe Gln Cys Ala Ala Glu Tyr Leu Ile Lys Glu Gly Tyr Thr Ser
530 535 540
Pro Lys Arg Leu Thr Ile Asn Gly Gly Ser Asn Gly Gly Leu Leu Val
545 550 555 560
Ala Ala Cys Ala Asn Gln Arg Pro Asp Leu Phe Gly Cys Val Ile Ala
565 570 575
Gln Val Gly Val Met Asp Met Leu Lys Phe His Lys Tyr Thr Ile Gly
580 585 590
His Ala Trp Thr Thr Asp Tyr Gly Cys Ser Asp Ser Lys Gln His Phe
595 600 605
Glu Trp Leu Val Lys Tyr Ser Pro Leu His Asn Val Lys Leu Pro Glu
610 615 620
Ala Asp Asp Ile Gln Tyr Pro Ser Met Leu Leu Leu Thr Ala Asp His

625 630 635 640
Asp Asp Arg Val Val Pro Leu His Ser Leu Lys Phe Ile Ala Thr Leu
645 650 655
Gln Tyr Ile Val Gly Arg Ser Arg Lys Gln Ser Asn Pro Leu Leu Ile
660 665 670
His Val Asp Thr Lys Ala Gly His Gly Ala Gly Lys Pro Thr Ala Lys
675 680 685
Val Ile Glu Glu Val Ser Asp Met Phe Ala Phe Ile Ala Arg Cys Leu
690 695 700
Asn Val Asp Trp Ile Pro
705 710

<210> 208
<211> 1806
<212> PRT
<213> Homo sapiens
<400> 208
Met Glu Pro Trp Ser Ser Arg Trp Lys Thr Lys Arg Trp Leu Trp Asp
1 5 10 15
Phe Thr Val Thr Thr Leu Ala Leu Thr Phe Leu Phe Gln Ala Arg Glu
20 25 30
Val Arg Gly Ala Ala Pro Val Asp Val Leu Lys Ala Leu Asp Phe His
35 40 45
Asn Ser Pro Glu Gly Ile Ser Lys Thr Thr Gly Phe Cys Thr Asn Arg
50 55 60
Lys Asn Ser Lys Gly Ser Asp Thr Ala Tyr Arg Val Ser Lys Gln Ala
65 70 75 80
Gln Leu Ser Ala Pro Thr Lys Gln Leu Phe Pro Gly Gly Thr Phe Pro
85 90 95
Glu Asp Phe Ser Ile Leu Phe Thr Val Lys Pro Lys Lys Gly Ile Gln
100 105 110
Ser Phe Leu Leu Ser Ile Tyr Asn Glu His Gly Ile Gln Gln Ile Gly
115 120 125
Val Glu Val Gly Arg Ser Pro Val Phe Leu Phe Glu Asp His Thr Gly
130 135 140
Lys Pro Ala Pro Glu Asp Tyr Pro Leu Phe Arg Thr Val Asn Ile Ala
145 150 155 160
Asp Gly Lys Trp His Arg Val Ala Ile Ser Val Glu Lys Lys Thr Val
165 170 175
Thr Met Ile Val Asp Cys Lys Lys Lys Thr Thr Lys Pro Leu Asp Arg
180 185 190
Ser Glu Arg Ala Ile Val Asp Thr Asn Gly Ile Thr Val Phe Gly Thr
195 200 205
Arg Ile Leu Asp Glu Glu Val Phe Glu Gly Asp Ile Gln Gln Phe Leu
210 215 220
Ile Thr Gly Asp Pro Lys Ala Ala Tyr Asp Tyr Cys Glu His Tyr Ser
225 230 235 240
Pro Asp Cys Asp Ser Ser Ala Pro Lys Ala Ala Gln Ala Gln Glu Pro
245 250 255
Gln Ile Asp Glu Tyr Ala Pro Glu Asp Ile Ile Glu Tyr Asp Tyr Glu
260 265 270
Tyr Gly Glu Ala Glu Tyr Lys Glu Ala Glu Ser Val Thr Glu Gly Pro
275 280 285
Thr Val Thr Glu Glu Thr Ile Ala Gln Thr Glu Ala Asn Ile Val Asp
290 295 300
Asp Phe Gln Glu Tyr Asn Tyr Gly Thr Met Glu Ser Tyr Gln Thr Glu
305 310 315 320
Ala Pro Arg His Val Ser Gly Thr Asn Glu Pro Asn Pro Val Glu Glu
325 330 335
Ile Phe Thr Glu Glu Tyr Leu Thr Gly Glu Asp Tyr Asp Ser Gln Arg
340 345 350
Lys Asn Ser Glu Asp Thr Leu Tyr Glu Asn Lys Glu Ile Asp Gly Arg
355 360 365
Asp Ser Asp Leu Leu Val Asp Gly Asp Leu Gly Glu Tyr Asp Phe Tyr
370 375 380
Glu Tyr Lys Glu Tyr Glu Asp Lys Pro Thr Ser Pro Pro Asn Glu Glu
385 390 395 400
Phe Gly Pro Gly Val Pro Ala Glu Thr Asp Ile Thr Glu Thr Ser Ile
405 410 415

```
Asn Gly His Gly Ala Tyr Gly Glu Lys Gly Gln Lys Gly Glu Pro Ala
            420                 425                 430
Val Val Glu Pro Gly Met Leu Val Glu Gly Pro Pro Gly Pro Ala Gly
        435                 440                 445
Pro Ala Gly Ile Met Gly Pro Pro Gly Leu Gln Gly Pro Thr Gly Pro
    450                 455                 460
Pro Gly Asp Pro Gly Asp Arg Gly Pro Pro Gly Arg Pro Gly Leu Pro
465                 470                 475                 480
Gly Ala Asp Gly Leu Pro Gly Pro Pro Gly Thr Met Leu Met Leu Pro
                485                 490                 495
Phe Arg Tyr Gly Gly Asp Gly Ser Lys Gly Pro Thr Ile Ser Ala Gln
            500                 505                 510
Glu Ala Gln Ala Gln Ala Ile Leu Gln Gln Ala Arg Ile Ala Leu Arg
        515                 520                 525
Gly Pro Pro Gly Pro Met Gly Leu Thr Gly Arg Pro Gly Pro Val Gly
    530                 535                 540
Gly Pro Gly Ser Ser Gly Ala Lys Gly Glu Ser Gly Asp Pro Gly Pro
545                 550                 555                 560
Gln Gly Pro Arg Gly Val Gln Gly Pro Pro Gly Pro Thr Gly Lys Pro
                565                 570                 575
Gly Lys Arg Gly Arg Pro Gly Ala Asp Gly Gly Arg Gly Met Pro Gly
            580                 585                 590
Glu Pro Gly Ala Lys Gly Asp Arg Gly Phe Asp Gly Leu Pro Gly Leu
        595                 600                 605
Pro Gly Asp Lys Gly His Arg Gly Glu Arg Gly Pro Gln Gly Pro Pro
    610                 615                 620
Gly Pro Pro Gly Asp Asp Gly Met Arg Gly Glu Asp Gly Glu Ile Gly
625                 630                 635                 640
Pro Arg Gly Leu Pro Gly Glu Ala Gly Pro Arg Gly Leu Leu Gly Pro
                645                 650                 655
Arg Gly Thr Pro Gly Ala Pro Gly Gln Pro Gly Met Ala Gly Val Asp
            660                 665                 670
Gly Pro Pro Gly Pro Lys Gly Asn Met Gly Pro Gln Gly Glu Pro Gly
        675                 680                 685
Pro Pro Gly Gln Gln Gly Asn Pro Gly Pro Gln Gly Leu Pro Gly Pro
    690                 695                 700
Gln Gly Pro Ile Gly Pro Pro Gly Glu Lys Gly Pro Gln Gly Lys Pro
705                 710                 715                 720
Gly Leu Ala Gly Leu Pro Gly Ala Asp Gly Pro Pro Gly His Pro Gly
                725                 730                 735
Lys Glu Gly Gln Ser Gly Glu Lys Gly Ala Leu Gly Pro Pro Gly Pro
            740                 745                 750
Gln Gly Pro Ile Gly Tyr Pro Gly Pro Arg Gly Val Lys Gly Ala Asp
        755                 760                 765
Gly Val Arg Gly Leu Lys Gly Ser Lys Gly Glu Lys Gly Glu Asp Gly
    770                 775                 780
Phe Pro Gly Phe Lys Gly Asp Met Gly Leu Lys Gly Asp Arg Gly Glu
785                 790                 795                 800
Val Gly Gln Ile Gly Pro Arg Gly Glu Asp Gly Pro Glu Gly Pro Lys
                805                 810                 815
Gly Arg Ala Gly Pro Thr Gly Asp Pro Gly Pro Ser Gly Gln Ala Gly
            820                 825                 830
Glu Lys Gly Lys Leu Gly Val Pro Gly Leu Pro Gly Tyr Pro Gly Arg
        835                 840                 845
Gln Gly Pro Lys Gly Ser Thr Gly Phe Pro Gly Phe Pro Gly Ala Asn
    850                 855                 860
Gly Glu Lys Gly Ala Arg Gly Val Ala Gly Lys Pro Gly Pro Arg Gly
865                 870                 875                 880
Gln Arg Gly Pro Thr Gly Pro Arg Gly Ser Arg Gly Ala Arg Gly Pro
                885                 890                 895
Thr Gly Lys Pro Gly Pro Lys Gly Thr Ser Gly Gly Asp Gly Pro Pro
            900                 905                 910
Gly Pro Pro Gly Glu Arg Gly Pro Gln Gly Pro Gln Gly Pro Val Gly
        915                 920                 925
Phe Pro Gly Pro Lys Gly Pro Pro Gly Pro Pro Gly Arg Met Gly Cys
    930                 935                 940
Pro Gly His Pro Gly Gln Arg Gly Glu Thr Gly Phe Gln Gly Lys Thr
945                 950                 955                 960
Gly Pro Pro Gly Pro Gly Gly Val Val Gly Pro Gln Gly Pro Thr Gly
```

965 970 975
Glu Thr Gly Pro Ile Gly Glu Arg Gly His Pro Gly Pro Pro Gly Pro
980 985 990
Pro Gly Glu Gln Gly Leu Pro Gly Ala Ala Gly Lys Glu Gly Ala Lys
995 1000 1005
Gly Asp Pro Gly Pro Gln Gly Ile Ser Gly Lys Asp Gly Pro Ala
1010 1015 1020
Gly Leu Arg Gly Phe Pro Gly Glu Arg Gly Leu Pro Gly Ala Gln
1025 1030 1035
Gly Ala Pro Gly Leu Lys Gly Gly Glu Gly Pro Gln Gly Pro Pro
1040 1045 1050
Gly Pro Val Gly Ser Pro Gly Glu Arg Gly Ser Ala Gly Thr Ala
1055 1060 1065
Gly Pro Ile Gly Leu Pro Gly Arg Pro Gly Pro Gln Gly Pro Pro
1070 1075 1080
Gly Pro Ala Gly Glu Lys Gly Ala Pro Gly Glu Lys Gly Pro Gln
1085 1090 1095
Gly Pro Ala Gly Arg Asp Gly Val Gln Gly Pro Val Gly Leu Pro
1100 1105 1110
Gly Pro Ala Gly Pro Ala Gly Ser Pro Gly Glu Asp Gly Asp Lys
1115 1120 1125
Gly Glu Ile Gly Glu Pro Gly Gln Lys Gly Ser Lys Gly Asp Lys
1130 1135 1140
Gly Glu Asn Gly Pro Pro Gly Pro Pro Gly Leu Gln Gly Pro Val
1145 1150 1155
Gly Ala Pro Gly Ile Ala Gly Gly Asp Gly Glu Pro Gly Pro Arg
1160 1165 1170
Gly Gln Gln Gly Met Phe Gly Gln Lys Gly Asp Glu Gly Ala Arg
1175 1180 1185
Gly Phe Pro Gly Pro Pro Gly Pro Ile Gly Leu Gln Gly Leu Pro
1190 1195 1200
Gly Pro Pro Gly Glu Lys Gly Glu Asn Gly Asp Val Gly Pro Trp
1205 1210 1215
Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Gln Gly Pro Asn
1220 1225 1230
Gly Ala Asp Gly Pro Gln Gly Pro Pro Gly Ser Val Gly Ser Val
1235 1240 1245
Gly Gly Val Gly Glu Lys Gly Glu Pro Gly Glu Ala Gly Asn Pro
1250 1255 1260
Gly Pro Pro Gly Glu Ala Gly Val Gly Gly Pro Lys Gly Glu Arg
1265 1270 1275
Gly Glu Lys Gly Glu Ala Gly Pro Pro Gly Ala Ala Gly Pro Pro
1280 1285 1290
Gly Ala Lys Gly Pro Pro Gly Asp Asp Gly Pro Lys Gly Asn Pro
1295 1300 1305
Gly Pro Val Gly Phe Pro Gly Asp Pro Gly Pro Pro Gly Glu Leu
1310 1315 1320
Gly Pro Ala Gly Gln Asp Gly Val Gly Gly Asp Lys Gly Glu Asp
1325 1330 1335
Gly Asp Pro Gly Gln Pro Gly Pro Pro Gly Pro Ser Gly Glu Ala
1340 1345 1350
Gly Pro Pro Gly Pro Pro Gly Lys Arg Gly Pro Pro Gly Ala Ala
1355 1360 1365
Gly Ala Glu Gly Arg Gln Gly Glu Lys Gly Ala Lys Gly Glu Ala
1370 1375 1380
Gly Ala Glu Gly Pro Pro Gly Lys Thr Gly Pro Val Gly Pro Gln
1385 1390 1395
Gly Pro Ala Gly Lys Pro Gly Pro Glu Gly Leu Arg Gly Ile Pro
1400 1405 1410
Gly Pro Val Gly Glu Gln Gly Leu Pro Gly Ala Ala Gly Gln Asp
1415 1420 1425
Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Pro Gly Leu Lys
1430 1435 1440
Gly Asp Pro Gly Ser Lys Gly Glu Lys Gly His Pro Gly Leu Ile
1445 1450 1455
Gly Leu Ile Gly Pro Pro Gly Glu Gln Gly Glu Lys Gly Asp Arg
1460 1465 1470
Gly Leu Pro Gly Thr Gln Gly Ser Pro Gly Ala Lys Gly Asp Gly
1475 1480 1485

```
Gly Ile Pro Gly Pro Ala Gly Pro Leu Gly Pro Pro Gly Pro Pro
    1490                1495                1500
Gly Leu Pro Gly Pro Gln Gly Pro Lys Gly Asn Lys Gly Ser Thr
    1505                1510                1515
Gly Pro Ala Gly Gln Lys Gly Asp Ser Gly Leu Pro Gly Pro Pro
    1520                1525                1530
Gly Pro Pro Gly Pro Pro Gly Glu Val Ile Gln Pro Leu Pro Ile
    1535                1540                1545
Leu Ser Ser Lys Lys Thr Arg Arg His Thr Glu Gly Met Gln Ala
    1550                1555                1560
Asp Ala Asp Asp Asn Ile Leu Asp Tyr Ser Asp Gly Met Glu Glu
    1565                1570                1575
Ile Phe Gly Ser Leu Asn Ser Leu Lys Gln Asp Ile Glu His Met
    1580                1585                1590
Lys Phe Pro Met Gly Thr Gln Thr Asn Pro Ala Arg Thr Cys Lys
    1595                1600                1605
Asp Leu Gln Leu Ser His Pro Asp Phe Pro Asp Gly Glu Tyr Trp
    1610                1615                1620
Ile Asp Pro Asn Gln Gly Cys Ser Gly Asp Ser Phe Lys Val Tyr
    1625                1630                1635
Cys Asn Phe Thr Ser Gly Gly Glu Thr Cys Ile Tyr Pro Asp Lys
    1640                1645                1650
Lys Ser Glu Gly Val Arg Ile Ser Ser Trp Pro Lys Glu Lys Pro
    1655                1660                1665
Gly Ser Trp Phe Ser Glu Phe Lys Arg Gly Lys Leu Leu Ser Tyr
    1670                1675                1680
Leu Asp Val Glu Gly Asn Ser Ile Asn Met Val Gln Met Thr Phe
    1685                1690                1695
Leu Lys Leu Leu Thr Ala Ser Ala Arg Gln Asn Phe Thr Tyr His
    1700                1705                1710
Cys His Gln Ser Ala Ala Trp Tyr Asp Val Ser Ser Gly Ser Tyr
    1715                1720                1725
Asp Lys Ala Leu Arg Phe Leu Gly Ser Asn Asp Glu Glu Met Ser
    1730                1735                1740
Tyr Asp Asn Asn Pro Phe Ile Lys Thr Leu Tyr Asp Gly Cys Thr
    1745                1750                1755
Ser Arg Lys Gly Tyr Glu Lys Thr Val Ile Glu Ile Asn Thr Pro
    1760                1765                1770
Lys Ile Asp Gln Val Pro Ile Val Asp Val Met Ile Asn Asp Phe
    1775                1780                1785
Gly Asp Gln Asn Gln Lys Phe Gly Phe Glu Val Gly Pro Val Cys
    1790                1795                1800
Phe Leu Gly
    1805
```

<210> 209
<211> 669
<212> PRT
<213> Homo sapiens
<400> 209

```
Met Thr Ala Ala Ala Gly Ser Ala Gly Arg Ala Ala Val Pro Leu Leu
1               5                  10                  15
Leu Cys Ala Leu Leu Ala Pro Gly Gly Ala Tyr Val Leu Asp Asp Ser
            20                  25                  30
Asp Gly Leu Gly Arg Glu Phe Asp Gly Ile Gly Ala Val Ser Gly Gly
        35                  40                  45
Gly Ala Thr Ser Arg Leu Leu Val Asn Tyr Pro Glu Pro Tyr Arg Ser
    50                  55                  60
Gln Ile Leu Asp Tyr Leu Phe Lys Pro Asn Phe Gly Ala Ser Leu His
65                  70                  75                  80
Ile Leu Lys Val Glu Ile Gly Gly Asp Gly Gln Thr Thr Asp Gly Thr
                85                  90                  95
Glu Pro Ser His Met His Tyr Ala Leu Asp Glu Asn Tyr Phe Arg Gly
            100                 105                 110
Tyr Glu Trp Trp Leu Met Lys Glu Ala Lys Lys Arg Asn Pro Asn Ile
        115                 120                 125
Thr Leu Ile Gly Leu Pro Trp Ser Phe Pro Gly Trp Leu Gly Lys Gly
    130                 135                 140
Phe Asp Trp Pro Tyr Val Asn Leu Gln Leu Thr Ala Tyr Tyr Val Val
```

```
145                 150                 155                 160
Thr Trp Ile Val Gly Ala Lys Arg Tyr His Asp Leu Asp Ile Asp Tyr
                165                 170                 175
Ile Gly Ile Trp Asn Glu Arg Ser Tyr Asn Ala Asn Tyr Ile Lys Ile
            180                 185                 190
Leu Arg Lys Met Leu Asn Tyr Gln Gly Leu Gln Arg Val Lys Ile Ile
        195                 200                 205
Ala Ser Asp Asn Leu Trp Glu Ser Ile Ser Ala Ser Met Leu Leu Asp
    210                 215                 220
Ala Glu Leu Phe Lys Val Val Asp Val Ile Gly Ala His Tyr Pro Gly
225                 230                 235                 240
Thr His Ser Ala Lys Asp Ala Lys Leu Thr Gly Lys Lys Leu Trp Ser
                245                 250                 255
Ser Glu Asp Phe Ser Thr Leu Asn Ser Asp Met Gly Ala Gly Cys Trp
            260                 265                 270
Gly Arg Ile Leu Asn Gln Asn Tyr Ile Asn Gly Tyr Met Thr Ser Thr
        275                 280                 285
Ile Ala Trp Asn Leu Val Ala Ser Tyr Tyr Glu Gln Leu Pro Tyr Gly
    290                 295                 300
Arg Cys Gly Leu Met Thr Ala Gln Glu Pro Trp Ser Gly His Tyr Val
305                 310                 315                 320
Val Glu Ser Pro Val Trp Val Ser Ala His Thr Thr Gln Phe Thr Gln
                325                 330                 335
Pro Gly Trp Tyr Tyr Leu Lys Thr Val Gly His Leu Glu Lys Gly Gly
            340                 345                 350
Ser Tyr Val Ala Leu Thr Asp Gly Leu Gly Asn Leu Thr Ile Ile Ile
        355                 360                 365
Glu Thr Met Ser His Lys His Ser Lys Cys Ile Arg Pro Phe Leu Pro
    370                 375                 380
Tyr Phe Asn Val Ser Gln Gln Phe Ala Thr Phe Val Leu Lys Gly Ser
385                 390                 395                 400
Phe Ser Glu Ile Pro Glu Leu Gln Val Trp Tyr Thr Lys Leu Gly Lys
                405                 410                 415
Thr Ser Glu Arg Phe Leu Phe Lys Gln Leu Asp Ser Leu Trp Leu Leu
            420                 425                 430
Asp Ser Asp Gly Ser Phe Thr Leu Ser Leu His Glu Asp Glu Leu Phe
        435                 440                 445
Thr Leu Thr Thr Leu Thr Thr Gly Arg Lys Gly Ser Tyr Pro Leu Pro
    450                 455                 460
Pro Lys Ser Gln Pro Phe Pro Ser Thr Tyr Lys Asp Asp Phe Asn Val
465                 470                 475                 480
Asp Tyr Pro Phe Phe Ser Glu Ala Pro Asn Phe Ala Asp Gln Thr Gly
                485                 490                 495
Val Phe Glu Tyr Phe Thr Asn Ile Glu Asp Pro Gly Glu His His Phe
            500                 505                 510
Thr Leu Arg Gln Val Leu Asn Gln Arg Pro Ile Thr Trp Ala Ala Asp
        515                 520                 525
Ala Ser Asn Thr Ile Ser Ile Ile Gly Asp Tyr Asn Trp Thr Asn Leu
    530                 535                 540
Thr Ile Lys Cys Asp Val Tyr Ile Glu Thr Pro Asp Thr Gly Gly Val
545                 550                 555                 560
Phe Ile Ala Gly Arg Val Asn Lys Gly Gly Ile Leu Ile Arg Ser Ala
                565                 570                 575
Arg Gly Ile Phe Phe Trp Ile Phe Ala Asn Gly Ser Tyr Arg Val Thr
            580                 585                 590
Gly Asp Leu Ala Gly Trp Ile Ile Tyr Ala Leu Gly Arg Val Glu Val
        595                 600                 605
Thr Ala Lys Lys Trp Tyr Thr Leu Thr Leu Thr Ile Lys Gly His Phe
    610                 615                 620
Ala Ser Gly Met Leu Asn Asp Lys Ser Leu Trp Thr Asp Ile Pro Val
625                 630                 635                 640
Asn Phe Pro Lys Asn Gly Trp Ala Ala Ile Gly Thr His Ser Phe Glu
                645                 650                 655
Phe Ala Gln Phe Asp Asn Phe Leu Val Glu Ala Thr Arg
            660                 665
```

<210> 210
<211> 508
<212> PRT

<213> Homo sapiens
<400> 210

```
Met Gln Arg Leu Leu Thr Pro Val Lys Arg Ile Leu Gln Leu Thr Arg
1               5                  10                  15
Ala Val Gln Glu Thr Ser Leu Thr Pro Ala Arg Leu Leu Pro Val Ala
            20                  25                  30
His Gln Arg Phe Ser Thr Ala Ser Ala Val Pro Leu Ala Lys Thr Asp
        35                  40                  45
Thr Trp Pro Lys Asp Val Gly Ile Leu Ala Leu Glu Val Tyr Phe Pro
    50                  55                  60
Ala Gln Tyr Val Asp Gln Thr Asp Leu Glu Lys Tyr Asn Asn Val Glu
65                  70                  75                  80
Ala Gly Lys Tyr Thr Val Gly Leu Gly Gln Thr Arg Met Gly Phe Cys
                85                  90                  95
Ser Val Gln Glu Asp Ile Asn Ser Leu Cys Leu Thr Val Val Gln Arg
            100                 105                 110
Leu Met Glu Arg Ile Gln Leu Pro Trp Asp Ser Val Gly Arg Leu Glu
        115                 120                 125
Val Gly Thr Glu Thr Ile Ile Asp Lys Ser Lys Ala Val Lys Thr Val
    130                 135                 140
Leu Met Glu Leu Phe Gln Asp Ser Gly Asn Thr Asp Ile Glu Gly Ile
145                 150                 155                 160
Asp Thr Thr Asn Ala Cys Tyr Gly Gly Thr Ala Ser Leu Phe Asn Ala
                165                 170                 175
Ala Asn Trp Met Glu Ser Ser Ser Trp Asp Gly Arg Tyr Ala Met Val
            180                 185                 190
Val Cys Gly Asp Ile Ala Val Tyr Pro Ser Gly Asn Ala Arg Pro Thr
        195                 200                 205
Gly Gly Ala Gly Ala Val Ala Met Leu Ile Gly Pro Lys Ala Pro Leu
    210                 215                 220
Ala Leu Glu Arg Gly Leu Arg Gly Thr His Met Glu Asn Val Tyr Asp
225                 230                 235                 240
Phe Tyr Lys Pro Asn Leu Ala Ser Glu Tyr Pro Ile Val Asp Gly Lys
                245                 250                 255
Leu Ser Ile Gln Cys Tyr Leu Arg Ala Leu Asp Arg Cys Tyr Thr Ser
            260                 265                 270
Tyr Arg Lys Lys Ile Gln Asn Gln Trp Lys Gln Ala Gly Ser Asp Arg
        275                 280                 285
Pro Phe Thr Leu Asp Asp Leu Gln Tyr Met Ile Phe His Thr Pro Phe
    290                 295                 300
Cys Lys Met Val Gln Lys Ser Leu Ala Arg Leu Met Phe Asn Asp Phe
305                 310                 315                 320
Leu Ser Ala Ser Ser Asp Thr Gln Thr Ser Leu Tyr Lys Gly Leu Glu
                325                 330                 335
Ala Phe Gly Gly Leu Lys Leu Glu Asp Thr Tyr Thr Asn Lys Asp Leu
            340                 345                 350
Asp Lys Ala Leu Leu Lys Ala Ser Gln Asp Met Phe Asp Lys Lys Thr
        355                 360                 365
Lys Ala Ser Leu Tyr Leu Ser Thr His Asn Gly Asn Met Tyr Thr Ser
    370                 375                 380
Ser Leu Tyr Gly Cys Leu Ala Ser Leu Leu Ser His His Ser Ala Gln
385                 390                 395                 400
Glu Leu Ala Gly Ser Arg Ile Gly Ala Phe Ser Tyr Gly Ser Gly Leu
                405                 410                 415
Ala Ala Ser Phe Phe Ser Phe Arg Val Ser Gln Asp Ala Ala Pro Gly
            420                 425                 430
Ser Pro Leu Asp Lys Leu Val Ser Ser Thr Ser Asp Leu Pro Lys Arg
        435                 440                 445
Leu Ala Ser Arg Lys Cys Val Ser Pro Glu Glu Phe Thr Glu Ile Met
    450                 455                 460
Asn Gln Arg Glu Gln Phe Tyr His Lys Val Asn Phe Ser Pro Pro Gly
465                 470                 475                 480
Asp Thr Asn Ser Leu Phe Pro Gly Thr Trp Tyr Leu Glu Arg Val Asp
                485                 490                 495
Glu Gln His Arg Arg Lys Tyr Ala Arg Arg Pro Val
            500                 505
```

<210> 211
<211> 548

<212> PRT
<213> Homo sapiens
<400> 211

```
Met Asn Ile Glu Val Val Glu Val Leu Thr Leu Asn Gln Glu Val Ala
1               5                  10                  15
Gly Pro Arg Asn Ala Gln Ile Gln Ala Leu Tyr Ala Glu Asp Gly Ser
            20                  25                  30
Leu Ser Ala Asp Ala Pro Ser Glu Gln Val Gln Gln Gln Gly Lys His
        35                  40                  45
Pro Gly Asp Pro Glu Ala Ala Arg Gln Arg Phe Arg Gln Phe Arg Tyr
    50                  55                  60
Lys Asp Met Thr Gly Pro Arg Glu Ala Leu Asp Gln Leu Arg Glu Leu
65                  70                  75                  80
Cys His Gln Trp Leu Gln Pro Lys Ala Arg Ser Lys Glu Gln Ile Leu
                85                  90                  95
Glu Leu Leu Val Leu Glu Gln Phe Leu Gly Ala Leu Pro Val Lys Leu
            100                 105                 110
Arg Thr Trp Val Glu Ser Gln His Pro Glu Asn Cys Gln Glu Val Val
        115                 120                 125
Ala Leu Val Glu Gly Val Thr Trp Met Ser Glu Glu Glu Val Leu Pro
    130                 135                 140
Ala Gly Gln Pro Ala Glu Gly Thr Thr Cys Cys Leu Glu Val Thr Ala
145                 150                 155                 160
Gln Gln Glu Glu Lys Gln Glu Asp Ala Ala Ile Cys Pro Val Thr Val
                165                 170                 175
Leu Pro Glu Glu Pro Val Thr Phe Gln Asp Val Ala Val Asp Phe Ser
            180                 185                 190
Arg Glu Glu Trp Gly Leu Leu Gly Pro Thr Gln Arg Thr Glu Tyr Arg
        195                 200                 205
Asp Val Met Leu Glu Thr Phe Gly His Leu Val Ser Val Gly Trp Glu
    210                 215                 220
Thr Thr Leu Glu Asn Lys Glu Leu Ala Pro Asn Ser Asp Ile Pro Glu
225                 230                 235                 240
Glu Glu Pro Ala Pro Ser Leu Lys Val Gln Glu Ser Ser Arg Asp Cys
                245                 250                 255
Ala Leu Ser Ser Thr Leu Glu Asp Thr Leu Gln Gly Gly Val Gln Glu
            260                 265                 270
Val Gln Asp Thr Val Leu Lys Gln Met Glu Ser Ala Gln Glu Lys Asp
        275                 280                 285
Leu Pro Gln Lys Lys His Phe Asp Asn Arg Glu Ser Gln Ala Asn Ser
    290                 295                 300
Gly Ala Leu Asp Thr Asn Gln Val Ser Leu Gln Lys Ile Asp Asn Pro
305                 310                 315                 320
Glu Ser Gln Ala Asn Ser Gly Ala Leu Asp Thr Asn Gln Val Leu Leu
                325                 330                 335
His Lys Ile Pro Pro Arg Lys Arg Leu Arg Lys Arg Asp Ser Gln Val
            340                 345                 350
Lys Ser Met Lys His Asn Ser Arg Val Lys Ile His Gln Lys Ser Cys
        355                 360                 365
Glu Arg Gln Lys Ala Lys Glu Gly Asn Gly Cys Arg Lys Thr Phe Ser
    370                 375                 380
Arg Ser Thr Lys Gln Ile Thr Phe Ile Arg Ile His Lys Gly Ser Gln
385                 390                 395                 400
Val Cys Arg Cys Ser Glu Cys Gly Lys Ile Phe Arg Asn Pro Arg Tyr
                405                 410                 415
Phe Ser Val His Lys Lys Ile His Thr Gly Glu Arg Pro Tyr Val Cys
            420                 425                 430
Gln Asp Cys Gly Lys Gly Phe Val Gln Ser Ser Ser Leu Thr Gln His
        435                 440                 445
Gln Arg Val His Ser Gly Glu Arg Pro Phe Glu Cys Gln Glu Cys Gly
    450                 455                 460
Arg Thr Phe Asn Asp Arg Ser Ala Ile Ser Gln His Leu Arg Thr His
465                 470                 475                 480
Thr Gly Ala Lys Pro Tyr Lys Cys Gln Asp Cys Gly Lys Ala Phe Arg
                485                 490                 495
Gln Ser Ser His Leu Ile Arg His Gln Arg Thr His Thr Gly Glu Arg
            500                 505                 510
Pro Tyr Ala Cys Asn Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser His
        515                 520                 525
```

Leu Ile Gly His Gln Arg Thr His Asn Arg Thr Lys Arg Lys Lys Lys
530 535 540
Gln Pro Thr Ser
545

<210> 212
<211> 84
<212> PRT
<213> Homo sapiens
<400> 212
Met Ala Thr Met Glu Asn Lys Val Ile Cys Ala Leu Val Leu Val Ser
1 5 10 15
Met Leu Ala Leu Gly Thr Leu Ala Glu Ala Gln Thr Glu Thr Cys Thr
20 25 30
Val Ala Pro Arg Glu Arg Gln Asn Cys Gly Phe Pro Gly Val Thr Pro
35 40 45
Ser Gln Cys Ala Asn Lys Gly Cys Cys Phe Asp Asp Thr Val Arg Gly
50 55 60
Val Pro Trp Cys Phe Tyr Pro Asn Thr Ile Asp Val Pro Pro Glu Glu
65 70 75 80
Glu Cys Glu Phe

<210> 213
<211> 339
<212> PRT
<213> Homo sapiens
<400> 213
Met Ala Met Gln Met Gln Leu Glu Ala Asn Ala Asp Thr Ser Val Glu
1 5 10 15
Glu Glu Ser Phe Gly Pro Gln Pro Ile Ser Arg Leu Glu Gln Cys Gly
20 25 30
Ile Asn Ala Asn Asp Val Lys Lys Leu Glu Glu Ala Gly Phe His Thr
35 40 45
Val Glu Ala Val Ala Tyr Ala Pro Lys Lys Glu Leu Ile Asn Ile Lys
50 55 60
Gly Ile Ser Glu Ala Lys Ala Asp Lys Ile Leu Ala Glu Ala Ala Lys
65 70 75 80
Leu Val Pro Met Gly Phe Thr Thr Ala Thr Glu Phe His Gln Arg Arg
85 90 95
Ser Glu Ile Ile Gln Ile Thr Thr Gly Ser Lys Glu Leu Asp Lys Leu
100 105 110
Leu Gln Gly Gly Ile Glu Thr Gly Ser Ile Thr Glu Met Phe Gly Glu
115 120 125
Phe Arg Thr Gly Lys Thr Gln Ile Cys His Thr Leu Ala Val Thr Cys
130 135 140
Gln Leu Pro Ile Asp Arg Gly Gly Gly Glu Gly Lys Ala Met Tyr Ile
145 150 155 160
Asp Thr Glu Gly Thr Phe Arg Pro Glu Arg Leu Leu Ala Val Ala Glu
165 170 175
Arg Tyr Gly Leu Ser Gly Ser Asp Val Leu Asp Asn Val Ala Tyr Ala
180 185 190
Arg Ala Phe Asn Thr Asp His Gln Thr Gln Leu Leu Tyr Gln Ala Ser
195 200 205
Ala Met Met Val Glu Ser Arg Tyr Ala Leu Leu Ile Val Asp Ser Ala
210 215 220
Thr Ala Leu Tyr Arg Thr Asp Tyr Ser Gly Arg Gly Glu Leu Ser Ala
225 230 235 240
Arg Gln Met His Leu Ala Arg Phe Leu Arg Met Leu Leu Arg Leu Ala
245 250 255
Asp Glu Phe Gly Val Ala Val Val Ile Thr Asn Gln Val Val Ala Gln
260 265 270
Val Asp Gly Ala Ala Met Phe Ala Ala Asp Pro Lys Lys Pro Ile Gly
275 280 285
Gly Asn Ile Ile Ala His Ala Ser Thr Thr Arg Leu Tyr Leu Arg Lys
290 295 300
Gly Arg Gly Glu Thr Arg Ile Cys Lys Ile Tyr Asp Ser Pro Cys Leu
305 310 315 320
Pro Glu Ala Glu Ala Met Phe Ala Ile Asn Ala Asp Gly Val Gly Asp

325 330 335
Ala Lys Asp

<210> 214
<211> 561
<212> PRT
<213> Homo sapiens
<400> 214
Met Cys Gly Ile Trp Ala Leu Phe Gly Ser Asp Asp Cys Leu Ser Val
1 5 10 15
Gln Cys Leu Ser Ala Met Lys Ile Ala His Arg Gly Pro Asp Ala Phe
20 25 30
Arg Phe Glu Asn Val Asn Gly Tyr Thr Asn Cys Cys Phe Gly Phe His
35 40 45
Arg Leu Ala Val Val Asp Pro Leu Phe Gly Met Gln Pro Ile Arg Val
50 55 60
Lys Lys Tyr Pro Tyr Leu Trp Leu Cys Tyr Asn Gly Glu Ile Tyr Asn
65 70 75 80
His Lys Lys Met Gln Gln His Phe Glu Phe Glu Tyr Gln Thr Lys Val
85 90 95
Asp Gly Glu Ile Ile Leu His Leu Tyr Asp Lys Gly Gly Ile Glu Gln
100 105 110
Thr Ile Cys Met Leu Asp Gly Val Phe Ala Phe Val Leu Leu Asp Thr
115 120 125
Ala Asn Lys Lys Val Phe Leu Gly Arg Asp Thr Tyr Gly Val Arg Pro
130 135 140
Leu Phe Lys Ala Met Thr Glu Asp Gly Phe Leu Ala Val Cys Ser Glu
145 150 155 160
Ala Lys Gly Leu Val Thr Leu Lys His Ser Ala Thr Pro Phe Leu Lys
165 170 175
Val Glu Pro Phe Leu Pro Gly His Tyr Glu Val Leu Asp Leu Lys Pro
180 185 190
Asn Gly Lys Val Ala Ser Val Glu Met Val Lys Tyr His His Cys Arg
195 200 205
Asp Glu Pro Leu His Ala Leu Tyr Asp Asn Val Glu Lys Leu Phe Pro
210 215 220
Gly Phe Glu Ile Glu Thr Val Lys Asn Asn Leu Arg Ile Leu Phe Asn
225 230 235 240
Asn Ala Val Lys Lys Arg Leu Met Thr Asp Arg Arg Ile Gly Cys Leu
245 250 255
Leu Ser Gly Gly Leu Asp Ser Ser Leu Val Ala Ala Thr Leu Leu Lys
260 265 270
Gln Leu Lys Glu Ala Gln Val Gln Tyr Pro Leu Gln Thr Phe Ala Ile
275 280 285
Gly Met Glu Asp Ser Pro Asp Leu Leu Ala Ala Arg Lys Val Ala Asp
290 295 300
His Ile Gly Ser Glu His Tyr Glu Val Leu Phe Asn Ser Glu Glu Gly
305 310 315 320
Ile Gln Ala Leu Asp Glu Val Ile Phe Ser Leu Glu Thr Tyr Asp Ile
325 330 335
Thr Thr Val Arg Ala Ser Val Gly Met Tyr Leu Ile Ser Lys Tyr Ile
340 345 350
Arg Lys Asn Thr Asp Ser Val Val Ile Phe Ser Gly Glu Gly Ser Asp
355 360 365
Glu Leu Thr Gln Gly Tyr Ile Tyr Phe His Lys Ala Pro Ser Pro Glu
370 375 380
Lys Ala Glu Glu Glu Ser Glu Arg Leu Leu Arg Glu Leu Tyr Leu Phe
385 390 395 400
Asp Val Leu Arg Ala Asp Arg Thr Thr Ala Ala His Gly Leu Glu Leu
405 410 415
Arg Val Pro Phe Leu Asp His Arg Phe Ser Ser Tyr Tyr Leu Ser Leu
420 425 430
Pro Pro Glu Met Arg Ile Pro Lys Asn Gly Ile Glu Lys His Leu Leu
435 440 445
Arg Glu Thr Phe Glu Asp Ser Asn Leu Ile Pro Lys Glu Ile Leu Trp
450 455 460
Arg Pro Lys Glu Ala Phe Ser Asp Gly Ile Thr Ser Val Lys Asn Ser
465 470 475 480

```
Trp Phe Lys Ile Leu Gln Glu Tyr Val Glu His Gln Val Asp Asp Ala
                485                 490                 495
Met Met Ala Asn Ala Ala Gln Lys Phe Pro Phe Asn Thr Pro Lys Thr
            500                 505                 510
Lys Glu Gly Tyr Tyr Tyr Arg Gln Val Phe Glu Arg His Tyr Pro Gly
        515                 520                 525
Arg Ala Asp Trp Leu Ser His Tyr Trp Met Pro Lys Trp Ile Asn Ala
    530                 535                 540
Thr Asp Pro Ser Ala Arg Thr Leu Thr His Tyr Lys Ser Ala Val Lys
545                 550                 555                 560
Ala
```

<210> 215
<211> 227
<212> PRT
<213> Homo sapiens
<400> 215

```
Met Ala Trp Lys Ser Gly Gly Ala Ser His Ser Glu Leu Ile His Asn
1               5                  10                  15
Leu Arg Lys Asn Gly Ile Ile Lys Thr Asp Lys Val Phe Glu Val Met
            20                  25                  30
Leu Ala Thr Asp Arg Ser His Tyr Ala Lys Cys Asn Pro Tyr Met Asp
        35                  40                  45
Ser Pro Gln Ser Ile Gly Phe Gln Ala Thr Ile Ser Ala Pro His Met
    50                  55                  60
His Ala Tyr Ala Leu Glu Leu Leu Phe Asp Gln Leu His Glu Gly Ala
65                  70                  75                  80
Lys Ala Leu Asp Val Gly Ser Gly Ser Gly Ile Leu Thr Ala Cys Phe
                85                  90                  95
Ala Arg Met Val Gly Cys Thr Gly Lys Val Ile Gly Ile Asp His Ile
            100                 105                 110
Lys Glu Leu Val Asp Asp Ser Val Asn Asn Val Arg Lys Asp Asp Pro
        115                 120                 125
Thr Leu Leu Ser Ser Gly Arg Val Gln Leu Val Val Gly Asp Gly Arg
    130                 135                 140
Met Gly Tyr Ala Glu Glu Ala Pro Tyr Asp Ala Ile His Val Gly Ala
145                 150                 155                 160
Ala Ala Pro Val Val Pro Gln Ala Leu Ile Asp Gln Leu Lys Pro Gly
                165                 170                 175
Gly Arg Leu Ile Leu Pro Val Gly Pro Ala Gly Gly Asn Gln Met Leu
            180                 185                 190
Glu Gln Tyr Asp Lys Leu Gln Asp Gly Ser Ile Lys Met Lys Pro Leu
        195                 200                 205
Met Gly Val Ile Tyr Val Pro Leu Thr Asp Lys Glu Lys Gln Trp Ser
    210                 215                 220
Arg Trp Lys
225
```

<210> 216
<211> 595
<212> PRT
<213> Homo sapiens
<400> 216

```
Met Thr Met Thr Leu His Thr Lys Ala Ser Gly Met Ala Leu Leu His
1               5                  10                  15
Gln Ile Gln Gly Asn Glu Leu Glu Pro Leu Asn Arg Pro Gln Leu Lys
            20                  25                  30
Ile Pro Leu Glu Arg Pro Leu Gly Glu Val Tyr Leu Asp Ser Ser Lys
        35                  40                  45
Pro Ala Val Tyr Asn Tyr Pro Glu Gly Ala Ala Tyr Glu Phe Asn Ala
    50                  55                  60
Ala Ala Ala Ala Asn Ala Gln Val Tyr Gly Gln Thr Gly Leu Pro Tyr
65                  70                  75                  80
Gly Pro Gly Ser Glu Ala Ala Ala Phe Gly Ser Asn Gly Leu Gly Gly
                85                  90                  95
Phe Pro Pro Leu Asn Ser Val Ser Pro Ser Pro Leu Met Leu Leu His
            100                 105                 110
Pro Pro Pro Gln Leu Ser Pro Phe Leu Gln Pro His Gly Gln Gln Val
```

```
        115                 120                 125
Pro Tyr Tyr Leu Glu Asn Glu Pro Ser Gly Tyr Thr Val Arg Glu Ala
    130                 135                 140
Gly Pro Pro Ala Phe Tyr Arg Pro Asn Ser Asp Asn Arg Arg Gln Gly
145                 150                 155                 160
Gly Arg Glu Arg Leu Ala Ser Thr Asn Asp Lys Gly Ser Met Ala Met
                165                 170                 175
Glu Ser Ala Lys Glu Thr Arg Tyr Cys Ala Val Cys Asn Asp Tyr Ala
            180                 185                 190
Ser Gly Tyr His Tyr Gly Val Trp Ser Cys Glu Gly Cys Lys Ala Phe
        195                 200                 205
Phe Lys Arg Ser Ile Gln Gly His Asn Asp Tyr Met Cys Pro Ala Thr
    210                 215                 220
Asn Gln Cys Thr Ile Asp Lys Asn Arg Arg Lys Ser Cys Gln Ala Cys
225                 230                 235                 240
Arg Leu Arg Lys Cys Tyr Glu Val Gly Met Met Lys Gly Gly Ile Arg
                245                 250                 255
Lys Asp Arg Arg Gly Gly Arg Met Leu Lys His Lys Arg Gln Arg Asp
            260                 265                 270
Asp Gly Glu Gly Arg Gly Glu Val Gly Ser Ala Gly Asp Met Arg Ala
        275                 280                 285
Ala Asn Leu Trp Pro Ser Pro Leu Met Ile Lys Arg Ser Lys Lys Asn
    290                 295                 300
Ser Leu Ala Leu Ser Leu Thr Ala Asp Gln Met Val Ser Ala Leu Leu
305                 310                 315                 320
Asp Ala Glu Pro Pro Ile Leu Tyr Ser Glu Tyr Asp Pro Thr Arg Pro
                325                 330                 335
Phe Ser Glu Ala Ser Met Met Gly Leu Leu Thr Asn Leu Ala Asp Arg
            340                 345                 350
Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly Phe Val
        355                 360                 365
Asp Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala Trp Leu
    370                 375                 380
Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His Pro Val
385                 390                 395                 400
Lys Leu Leu Phe Ala Pro Asn Leu Leu Leu Asp Arg Asn Gln Gly Lys
                405                 410                 415
Cys Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala Thr Ser
            420                 425                 430
Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val Cys Leu
        435                 440                 445
Lys Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Leu Ser Ser
    450                 455                 460
Thr Leu Lys Ser Leu Glu Glu Lys Asp His Ile His Arg Val Leu Asp
465                 470                 475                 480
Lys Ile Thr Asp Thr Leu Ile His Leu Met Ala Lys Ala Gly Leu Thr
                485                 490                 495
Leu Gln Gln Gln His Gln Arg Leu Ala Gln Leu Leu Leu Ile Leu Ser
            500                 505                 510
His Ile Arg His Met Ser Asn Lys Gly Met Glu His Leu Tyr Ser Met
        515                 520                 525
Lys Cys Lys Asn Val Val Pro Leu Tyr Asp Leu Leu Leu Glu Met Leu
    530                 535                 540
Asp Ala His Arg Leu His Ala Pro Thr Ser Arg Gly Gly Ala Ser Val
545                 550                 555                 560
Glu Glu Thr Asp Gln Ser His Leu Ala Thr Ala Gly Ser Thr Ser Ser
                565                 570                 575
His Ser Leu Gln Lys Tyr Tyr Ile Thr Gly Glu Ala Glu Gly Phe Pro
            580                 585                 590
Ala Thr Val
        595
```

<210> 217
<211> 427
<212> PRT
<213> Homo sapiens
<400> 217

```
Met Ala Val Leu Ala Ala Leu Leu Arg Ser Gly Ala Arg Ser Arg Ser
1               5                   10                  15
```

```
Pro Leu Leu Arg Arg Leu Val Gln Glu Ile Arg Tyr Val Glu Arg Ser
            20                  25                  30
Tyr Val Ser Lys Pro Thr Leu Lys Glu Val Val Ile Val Ser Ala Thr
        35                  40                  45
Arg Thr Pro Ile Gly Ser Phe Leu Gly Ser Leu Ser Leu Leu Pro Ala
    50                  55                  60
Thr Lys Leu Gly Ser Ile Ala Ile Gln Gly Ala Ile Glu Lys Ala Gly
65                  70                  75                  80
Ile Pro Lys Glu Glu Val Lys Glu Ala Tyr Met Gly Asn Val Leu Gln
                85                  90                  95
Gly Gly Glu Gly Gln Ala Pro Thr Arg Gln Ala Val Leu Gly Ala Gly
            100                 105                 110
Leu Pro Ile Ser Thr Pro Cys Thr Thr Ile Asn Lys Val Cys Ala Ser
        115                 120                 125
Gly Met Lys Ala Ile Met Met Ala Ser Gln Ser Leu Met Cys Gly His
    130                 135                 140
Gln Asp Val Met Val Ala Gly Gly Met Glu Ser Met Ser Asn Val Pro
145                 150                 155                 160
Tyr Val Met Asn Arg Gly Ser Thr Pro Tyr Gly Gly Val Lys Leu Glu
                165                 170                 175
Asp Leu Ile Val Lys Asp Gly Leu Thr Asp Val Tyr Asn Lys Ile His
            180                 185                 190
Met Gly Ser Cys Ala Glu Asn Thr Ala Lys Lys Leu Asn Ile Ala Arg
        195                 200                 205
Asn Glu Gln Asp Ala Tyr Ala Ile Asn Ser Tyr Thr Arg Ser Lys Ala
    210                 215                 220
Ala Trp Glu Ala Gly Lys Phe Gly Asn Glu Val Ile Pro Val Thr Val
225                 230                 235                 240
Thr Val Lys Gly Gln Pro Asp Val Val Val Lys Glu Asp Glu Glu Tyr
                245                 250                 255
Lys Arg Val Asp Phe Ser Lys Val Pro Lys Leu Lys Thr Val Phe Gln
            260                 265                 270
Lys Glu Asn Gly Thr Val Thr Ala Ala Asn Ala Ser Thr Leu Asn Asp
        275                 280                 285
Gly Ala Ala Ala Leu Val Leu Met Thr Ala Asp Ala Ala Lys Arg Leu
    290                 295                 300
Asn Val Thr Pro Leu Ala Arg Ile Val Ala Phe Ala Asp Ala Ala Val
305                 310                 315                 320
Glu Pro Ile Asp Phe Pro Ile Ala Pro Val Tyr Ala Ala Ser Met Val
                325                 330                 335
Leu Lys Asp Val Gly Leu Lys Lys Glu Asp Ile Ala Met Trp Glu Val
            340                 345                 350
Asn Glu Ala Phe Ser Leu Val Val Leu Ala Asn Ile Lys Met Leu Glu
        355                 360                 365
Ile Asp Pro Gln Lys Val Asn Ile Asn Gly Gly Ala Val Ser Leu Gly
    370                 375                 380
His Pro Ile Gly Met Ser Gly Ala Arg Ile Val Gly His Leu Thr His
385                 390                 395                 400
Ala Leu Lys Gln Gly Glu Tyr Gly Leu Ala Ser Ile Cys Asn Gly Gly
                405                 410                 415
Gly Gly Ala Ser Ala Met Leu Ile Gln Lys Leu
            420                 425

<210>  218
<211>  273
<212>  PRT
<213>  Homo sapiens
<400>  218
Met Ala Ala Ala Asp Gly Ala Leu Pro Glu Ala Ala Ala Leu Glu Gln
1               5                   10                  15
Pro Ala Glu Leu Pro Ala Ser Val Arg Ala Ser Ile Glu Arg Lys Arg
            20                  25                  30
Gln Arg Ala Leu Met Leu Arg Gln Ala Arg Leu Ala Ala Arg Pro Tyr
        35                  40                  45
Ser Ala Thr Ala Ala Ala Ala Thr Gly Gly Met Ala Asn Val Lys Ala
    50                  55                  60
Ala Pro Lys Ile Ile Asp Thr Gly Gly Gly Phe Ile Leu Glu Glu Glu
65                  70                  75                  80
Glu Glu Glu Glu Gln Lys Ile Gly Lys Val Val His Gln Pro Gly Pro
```

```
                85                  90                  95
Val Met Glu Phe Asp Tyr Val Ile Cys Glu Glu Cys Gly Lys Glu Phe
            100                 105                 110
Met Asp Ser Tyr Leu Met Asn His Phe Asp Leu Pro Thr Cys Asp Asn
        115                 120                 125
Cys Arg Asp Ala Asp Asp Lys His Lys Leu Ile Thr Lys Thr Glu Ala
    130                 135                 140
Lys Gln Glu Tyr Leu Leu Lys Asp Cys Asp Leu Glu Lys Arg Glu Pro
145                 150                 155                 160
Pro Leu Lys Phe Ile Val Lys Lys Asn Pro His His Ser Gln Trp Gly
                165                 170                 175
Asp Met Lys Leu Tyr Leu Lys Leu Gln Ile Val Lys Arg Ser Leu Glu
            180                 185                 190
Val Trp Gly Ser Gln Glu Ala Leu Glu Glu Ala Lys Glu Val Arg Gln
        195                 200                 205
Glu Asn Arg Glu Lys Met Lys Gln Lys Lys Phe Asp Lys Lys Val Lys
    210                 215                 220
Glu Leu Arg Arg Ala Val Arg Ser Ser Val Trp Lys Arg Glu Thr Ile
225                 230                 235                 240
Val His Gln His Glu Tyr Gly Pro Glu Glu Asn Leu Glu Asp Asp Met
                245                 250                 255
Tyr Arg Lys Thr Cys Thr Met Cys Gly His Glu Leu Thr Tyr Glu Lys
            260                 265                 270
Met
```

<210> 219
<211> 1227
<212> PRT
<213> Homo sapiens
<400> 219

```
Met Asp Ser Phe Asp Leu Ala Leu Leu Gln Glu Trp Asp Leu Glu Ser
1                   5                   10                  15
Leu Cys Val Tyr Glu Pro Asp Arg Asn Ala Leu Arg Arg Lys Glu Arg
            20                  25                  30
Glu Arg Arg Asn Gln Glu Thr Gln Gln Asp Asp Gly Thr Phe Asn Ser
        35                  40                  45
Ser Tyr Ser Leu Phe Ser Glu Pro Tyr Lys Thr Asn Lys Gly Asp Glu
    50                  55                  60
Leu Ser Asn Arg Ile Gln Asn Thr Leu Gly Asn Tyr Asp Glu Met Lys
65                  70                  75                  80
Asp Phe Leu Thr Asp Arg Thr Asn Gln Ser His Leu Val Gly Val Pro
                85                  90                  95
Lys Pro Gly Val Pro Gln Thr Pro Val Asn Lys Ile Asp Glu His Phe
            100                 105                 110
Val Ala Asp Ser Arg Ala Gln Asn Gln Pro Ser Ser Ile Cys Ser Thr
        115                 120                 125
Thr Thr Ser Thr Pro Ala Ala Val Pro Val Gln Gln Ser Lys Arg Gly
    130                 135                 140
Thr Met Gly Trp Gln Lys Ala Gly His Pro Pro Ser Asp Gly Gln Gln
145                 150                 155                 160
Arg Ala Thr Gln Gln Gly Ser Leu Arg Thr Leu Leu Gly Asp Gly Val
                165                 170                 175
Gly Arg Gln Gln Pro Arg Ala Lys Gln Val Cys Asn Val Glu Val Gly
            180                 185                 190
Leu Gln Thr Gln Glu Arg Pro Pro Ala Met Ala Ala Lys His Ser Ser
        195                 200                 205
Ser Gly His Cys Val Gln Asn Phe Pro Pro Ser Leu Ala Ser Lys Pro
    210                 215                 220
Ser Leu Val Gln Gln Lys Pro Thr Ala Tyr Val Arg Pro Met Asp Gly
225                 230                 235                 240
Gln Asp Gln Ala Pro Asp Glu Ser Pro Lys Leu Lys Ser Ser Ser Glu
                245                 250                 255
Thr Ser Val His Cys Thr Ser Tyr Arg Gly Val Pro Ala Ser Lys Pro
            260                 265                 270
Glu Pro Ala Arg Ala Lys Ala Lys Leu Ser Lys Phe Ser Ile Pro Lys
        275                 280                 285
Gln Gly Glu Glu Ser Arg Ser Gly Glu Thr Asn Ser Cys Val Glu Glu
    290                 295                 300
```

```
Ile Ile Arg Glu Met Thr Trp Leu Pro Pro Leu Ser Ala Ile Gln Ala
305                 310                 315                 320
Pro Gly Lys Val Glu Pro Thr Lys Phe Pro Phe Pro Asn Lys Asp Ser
                325                 330                 335
Gln Leu Val Ser Ser Gly His Asn Asn Pro Lys Lys Gly Asp Ala Glu
            340                 345                 350
Pro Glu Ser Pro Asp Asn Gly Thr Ser Asn Thr Ser Met Leu Glu Asp
        355                 360                 365
Asp Leu Lys Leu Ser Ser Asp Glu Glu Glu Asn Glu Gln Gln Ala Ala
    370                 375                 380
Gln Arg Thr Ala Leu Arg Ala Leu Ser Asp Ser Ala Val Val Gln Gln
385                 390                 395                 400
Pro Asn Cys Arg Thr Ser Val Pro Ser Ser Lys Gly Ser Ser Ser Ser
                405                 410                 415
Ser Ser Ser Gly Thr Ser Ser Ser Ser Ser Asp Ser Glu Ser Ser Ser
            420                 425                 430
Gly Ser Asp Ser Glu Thr Glu Ser Ser Ser Ser Glu Ser Glu Gly Ser
        435                 440                 445
Lys Pro Pro His Phe Ser Ser Pro Glu Ala Glu Pro Ala Ser Ser Asn
    450                 455                 460
Lys Trp Gln Leu Asp Lys Trp Leu Asn Lys Val Asn Pro His Lys Pro
465                 470                 475                 480
Pro Ile Leu Ile Gln Asn Glu Ser His Gly Ser Glu Ser Asn Gln Tyr
                485                 490                 495
Tyr Asn Pro Val Lys Glu Asp Val Gln Asp Cys Gly Lys Val Pro Asp
            500                 505                 510
Val Cys Gln Pro Ser Leu Arg Glu Lys Glu Ile Lys Ser Thr Cys Lys
        515                 520                 525
Glu Glu Gln Arg Pro Arg Thr Ala Asn Lys Ala Pro Gly Ser Lys Gly
    530                 535                 540
Val Lys Gln Lys Ser Pro Pro Ala Ala Val Ala Val Ala Val Ser Ala
545                 550                 555                 560
Ala Ala Pro Pro Pro Ala Val Pro Cys Ala Pro Ala Glu Asn Ala Pro
                565                 570                 575
Ala Pro Ala Arg Arg Ser Ala Gly Lys Lys Pro Thr Arg Arg Thr Glu
            580                 585                 590
Arg Thr Ser Ala Gly Asp Gly Ala Asn Cys His Arg Pro Glu Glu Pro
        595                 600                 605
Ala Ala Ala Asp Ala Leu Gly Thr Ser Val Val Val Pro Pro Glu Pro
    610                 615                 620
Thr Lys Thr Arg Pro Cys Gly Asn Asn Arg Ala Ser His Arg Lys Glu
625                 630                 635                 640
Leu Arg Ser Ser Val Thr Cys Glu Lys Arg Arg Thr Arg Gly Leu Ser
                645                 650                 655
Arg Ile Val Pro Lys Ser Lys Glu Phe Ile Glu Thr Glu Ser Ser Ser
            660                 665                 670
Ser Ser Ser Ser Ser Asp Ser Asp Leu Glu Ser Glu Gln Glu Glu Tyr
        675                 680                 685
Pro Leu Ser Lys Ala Gln Thr Val Ala Ala Ser Ala Ser Ser Gly Asn
    690                 695                 700
Asp Gln Arg Leu Lys Glu Ala Ala Ala Asn Gly Gly Ser Gly Pro Arg
705                 710                 715                 720
Ala Pro Val Gly Ser Ile Asn Ala Arg Thr Thr Ser Asp Ile Ala Lys
                725                 730                 735
Glu Leu Glu Glu Gln Phe Tyr Thr Leu Val Pro Phe Gly Arg Asn Glu
            740                 745                 750
Leu Leu Ser Pro Leu Lys Asp Ser Asp Glu Ile Arg Ser Leu Trp Val
        755                 760                 765
Lys Ile Asp Leu Thr Leu Leu Ser Arg Ile Pro Glu His Leu Pro Gln
    770                 775                 780
Glu Pro Gly Val Leu Ser Ala Pro Ala Thr Lys Asp Ser Glu Ser Ala
785                 790                 795                 800
Pro Pro Ser His Thr Ser Asp Thr Pro Ala Glu Lys Ala Leu Pro Lys
                805                 810                 815
Ser Lys Arg Lys Arg Lys Cys Asp Asn Glu Asp Asp Tyr Arg Glu Ile
            820                 825                 830
Lys Lys Ser Gln Gly Glu Lys Asp Ser Ser Ser Arg Leu Ala Thr Ser
        835                 840                 845
Thr Ser Asn Thr Leu Ser Ala Asn His Cys Asn Met Asn Ile Asn Ser
```

```
    850                 855                 860
Val Ala Ile Pro Ile Asn Lys Asn Glu Lys Met Leu Arg Ser Pro Ile
865                 870                 875                 880
Ser Pro Leu Ser Asp Ala Ser Lys His Lys Tyr Thr Ser Glu Asp Leu
                885                 890                 895
Thr Ser Ser Ser Arg Pro Asn Gly Asn Ser Leu Phe Thr Ser Ala Ser
            900                 905                 910
Ser Ser Lys Lys Pro Lys Ala Asp Ser Gln Leu Gln Pro His Gly Gly
        915                 920                 925
Asp Leu Thr Lys Ala Ala His Asn Asn Ser Glu Asn Ile Pro Leu His
    930                 935                 940
Lys Ser Arg Pro Gln Thr Lys Pro Trp Ser Pro Gly Ser Asn Gly His
945                 950                 955                 960
Arg Asp Cys Lys Arg Gln Lys Leu Val Phe Asp Asp Met Pro Arg Ser
                965                 970                 975
Ala Asp Tyr Phe Met Gln Glu Ala Lys Arg Met Lys His Lys Ala Asp
            980                 985                 990
Ala Met Val Glu Lys Phe Gly Lys  Ala Leu Asn Tyr Ala  Glu Ala Ala
        995                 1000                1005
Leu Ser  Phe Ile Glu Cys Gly  Asn Ala Met Glu Gln  Gly Pro Met
    1010                1015                1020
Glu Ser  Lys Ser Pro Tyr Tyr  Leu Met Tyr Ser Glu  Thr Val Glu
    1025                1030                1035
Leu Ile  Arg Tyr Ala Met Arg  Leu Lys Thr His Ser  Gly Pro Asn
    1040                1045                1050
Ala Thr  Pro Glu Asp Lys Gln  Leu Ala Ala Leu Cys  Tyr Arg Cys
    1055                1060                1065
Leu Ala  Leu Leu Tyr Trp Arg  Met Phe Arg Leu Lys  Arg Asp His
    1070                1075                1080
Ala Val  Lys Tyr Ser Lys Ala  Leu Ile Asp Tyr Phe  Lys Asn Ser
    1085                1090                1095
Ser Lys  Ala Ala Gln Ala Pro  Ser Pro Trp Gly Ala  Ser Gly Lys
    1100                1105                1110
Ser Thr  Gly Thr Pro Ser Pro  Ile Ser Pro Asn Pro  Phe Pro Gly
    1115                1120                1125
Ser Ser  Val Gly Ser Gln Gly  Ser Leu Ser Asn Ala  Ser Ala Leu
    1130                1135                1140
Ser Pro  Ser Thr Ile Val Ser  Ile Pro Gln Arg Ile  His Gln Met
    1145                1150                1155
Ala Ala  Asn His Val Ser Ile  Thr Asn Ser Ile Leu  His Ser Tyr
    1160                1165                1170
Asp Tyr  Trp Glu Met Ala Asp  Asn Leu Ala Lys Glu  Asn Arg Glu
    1175                1180                1185
Phe Phe  Asn Asp Leu Asp Leu  Leu Met Gly Pro Val  Thr Leu His
    1190                1195                1200
Ser Ser  Met Glu His Leu Val  Gln Tyr Ser Gln Gln  Gly Leu His
    1205                1210                1215
Trp Leu  Arg Asn Ser Ala His  Leu Ser
    1220                1225
```

<210> 220
<211> 680
<212> PRT
<213> Homo sapiens
<400> 220

```
Met Leu Pro Gln Ile Pro Phe Leu Leu Leu Val Ser Leu Asn Leu Val
1               5                  10                  15
His Gly Val Phe Tyr Ala Glu Arg Tyr Gln Met Pro Thr Gly Ile Lys
            20                  25                  30
Gly Pro Leu Pro Asn Thr Lys Thr Gln Phe Phe Ile Pro Tyr Thr Ile
        35                  40                  45
Lys Ser Lys Gly Ile Ala Val Arg Gly Glu Gln Gly Thr Pro Gly Pro
    50                  55                  60
Pro Gly Pro Ala Gly Pro Arg Gly His Pro Gly Pro Ser Gly Pro Pro
65                  70                  75                  80
Gly Lys Pro Gly Tyr Gly Ser Pro Gly Leu Gln Gly Glu Pro Gly Leu
                85                  90                  95
Pro Gly Pro Pro Gly Pro Ser Ala Val Gly Lys Pro Gly Val Pro Gly
            100                 105                 110
```

Leu Pro Gly Lys Pro Gly Glu Arg Gly Pro Tyr Gly Pro Lys Gly Asp
115 120 125
Val Gly Pro Ala Gly Leu Pro Gly Pro Arg Gly Pro Pro Gly Pro Pro
130 135 140
Gly Ile Pro Gly Pro Ala Gly Ile Ser Val Pro Gly Lys Pro Gly Gln
145 150 155 160
Gln Gly Pro Thr Gly Ala Pro Gly Pro Arg Gly Phe Pro Gly Glu Lys
165 170 175
Gly Ala Pro Gly Val Pro Gly Met Asn Gly Gln Lys Gly Glu Met Gly
180 185 190
Tyr Gly Ala Pro Gly Arg Pro Gly Glu Arg Gly Leu Pro Gly Pro Gln
195 200 205
Gly Pro Thr Gly Pro Ser Gly Pro Pro Gly Val Gly Lys Arg Gly Glu
210 215 220
Asn Gly Val Pro Gly Gln Pro Gly Ile Lys Gly Asp Arg Gly Phe Pro
225 230 235 240
Gly Glu Met Gly Pro Ile Gly Pro Pro Gly Pro Gln Gly Pro Pro Gly
245 250 255
Glu Arg Gly Pro Glu Gly Ile Gly Lys Pro Gly Ala Ala Gly Ala Pro
260 265 270
Gly Gln Pro Gly Ile Pro Gly Thr Lys Gly Leu Pro Gly Ala Pro Gly
275 280 285
Ile Ala Gly Pro Pro Gly Pro Pro Gly Phe Gly Lys Pro Gly Leu Pro
290 295 300
Gly Leu Lys Gly Glu Arg Gly Pro Ala Gly Leu Pro Gly Gly Pro Gly
305 310 315 320
Ala Lys Gly Glu Gln Gly Pro Ala Gly Leu Pro Gly Lys Pro Gly Leu
325 330 335
Thr Gly Pro Pro Gly Asn Met Gly Pro Gln Gly Pro Lys Gly Ile Pro
340 345 350
Gly Ser His Gly Leu Pro Gly Pro Lys Gly Glu Thr Gly Pro Ala Gly
355 360 365
Pro Ala Gly Tyr Pro Gly Ala Lys Gly Glu Arg Gly Ser Pro Gly Ser
370 375 380
Asp Gly Lys Pro Gly Tyr Pro Gly Lys Pro Gly Leu Asp Gly Pro Lys
385 390 395 400
Gly Asn Pro Gly Leu Pro Gly Pro Lys Gly Asp Pro Gly Val Gly Gly
405 410 415
Pro Pro Gly Leu Pro Gly Pro Val Gly Pro Ala Gly Ala Lys Gly Met
420 425 430
Pro Gly His Asn Gly Glu Ala Gly Pro Arg Gly Ala Pro Gly Ile Pro
435 440 445
Gly Thr Arg Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Phe Pro Gly
450 455 460
Ser Lys Gly Asp Pro Gly Ser Pro Gly Pro Pro Gly Pro Ala Gly Ile
465 470 475 480
Ala Thr Lys Gly Leu Asn Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly
485 490 495
Pro Arg Gly His Ser Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Pro
500 505 510
Pro Gly Pro Pro Gly Gln Ala Val Met Pro Glu Gly Phe Ile Lys Ala
515 520 525
Gly Gln Arg Pro Ser Leu Ser Gly Thr Pro Leu Val Ser Ala Asn Gln
530 535 540
Gly Val Thr Gly Met Pro Val Ser Ala Phe Thr Val Ile Leu Ser Lys
545 550 555 560
Ala Tyr Pro Ala Ile Gly Thr Pro Ile Pro Phe Asp Lys Ile Leu Tyr
565 570 575
Asn Arg Gln Gln His Tyr Asp Pro Arg Thr Gly Ile Phe Thr Cys Gln
580 585 590
Ile Pro Gly Ile Tyr Tyr Phe Ser Tyr His Val His Val Lys Gly Thr
595 600 605
His Val Trp Val Gly Leu Tyr Lys Asn Gly Thr Pro Val Met Tyr Thr
610 615 620
Tyr Asp Glu Tyr Thr Lys Gly Tyr Leu Asp Gln Ala Ser Gly Ser Ala
625 630 635 640
Ile Ile Asp Leu Thr Glu Asn Asp Gln Val Trp Leu Gln Leu Pro Asn
645 650 655
Ala Glu Ser Asn Gly Leu Tyr Ser Ser Glu Tyr Val His Ser Ser Phe

660 665 670
Ser Gly Phe Leu Val Ala Pro Met
675 680

<210> 221
<211> 622
<212> PRT
<213> Homo sapiens
<400> 221
Met Gly Leu Tyr Gly Gln Ala Cys Pro Ser Val Thr Ser Leu Arg Met
1 5 10 15
Thr Ser Glu Leu Glu Ser Ser Leu Thr Ser Met Asp Trp Leu Pro Gln
20 25 30
Leu Thr Met Arg Ala Ala Ile Gln Lys Ser Asp Ala Thr Gln Asn Ala
35 40 45
His Gly Thr Gly Ile Ser Lys Lys Asn Ala Leu Leu Asp Pro Asn Thr
50 55 60
Thr Leu Asp Gln Glu Glu Val Gln Gln His Lys Asp Gly Lys Pro Pro
65 70 75 80
Tyr Ser Tyr Ala Ser Leu Ile Thr Phe Ala Ile Asn Ser Ser Pro Lys
85 90 95
Lys Lys Met Thr Leu Ser Glu Ile Tyr Gln Trp Ile Cys Asp Asn Phe
100 105 110
Pro Tyr Tyr Arg Glu Ala Gly Ser Gly Trp Lys Asn Ser Ile Arg His
115 120 125
Asn Leu Ser Leu Asn Lys Cys Phe Leu Lys Val Pro Arg Ser Lys Asp
130 135 140
Asp Pro Gly Lys Gly Ser Tyr Trp Ala Ile Asp Thr Asn Pro Lys Glu
145 150 155 160
Asp Ala Leu Pro Thr Arg Pro Lys Lys Arg Ala Arg Ser Val Glu Arg
165 170 175
Ala Ser Thr Pro Tyr Ser Ile Asp Ser Asp Ser Leu Gly Met Glu Cys
180 185 190
Ile Ile Ser Gly Ser Ala Ser Pro Thr Leu Ala Ile Asn Thr Val Thr
195 200 205
Asn Lys Val Thr Leu Tyr Asn Thr Asp Gln Asp Gly Ser Asp Ser Pro
210 215 220
Arg Ser Ser Leu Asn Asn Ser Leu Ser Asp Gln Ser Leu Ala Ser Val
225 230 235 240
Asn Leu Asn Ser Val Gly Ser Val His Ser Tyr Thr Pro Val Thr Ser
245 250 255
His Pro Glu Ser Val Ser Gln Ser Leu Thr Pro Gln Gln Gln Pro Gln
260 265 270
Tyr Asn Leu Pro Glu Arg Asp Lys Gln Leu Leu Phe Ser Glu Tyr Asn
275 280 285
Phe Glu Asp Leu Ser Ala Ser Phe Arg Ser Leu Tyr Lys Ser Val Phe
290 295 300
Glu Gln Ser Leu Ser Gln Gln Gly Leu Met Asn Ile Pro Ser Glu Ser
305 310 315 320
Ser Gln Gln Ser His Thr Ser Cys Thr Tyr Gln His Ser Pro Ser Ser
325 330 335
Thr Val Ser Thr His Pro His Ser Asn Gln Ser Ser Leu Ser Asn Ser
340 345 350
His Gly Ser Gly Leu Asn Thr Thr Gly Ser Asn Ser Val Ala Gln Val
355 360 365
Ser Leu Ser His Pro Gln Met His Pro Gln Pro Ser Pro His Pro Pro
370 375 380
His Arg Pro His Gly Leu Pro Gln His Pro Gln Arg Ser Pro His Pro
385 390 395 400
Ala Pro His Pro Gln Gln His Ser Gln Leu Gln Ser Pro His Pro Gln
405 410 415
His Pro Ser Pro His Gln His Ile Gln His His Pro Asn His Gln His
420 425 430
Gln Thr Leu Thr His Gln Ala Pro Pro Pro Pro Gln Gln Val Ser Cys
435 440 445
Asn Ser Gly Val Ser Asn Asp Trp Tyr Ala Thr Leu Asp Met Leu Lys
450 455 460
Glu Ser Cys Arg Ile Ala Ser Ser Val Asn Trp Ser Asp Val Asp Leu
465 470 475 480

```
Ser Gln Phe Gln Gly Leu Met Glu Ser Met Arg Gln Ala Asp Leu Lys
                485                 490                 495
Asn Trp Ser Leu Asp Gln Val Gln Phe Ala Asp Leu Cys Ser Ser Leu
            500                 505                 510
Asn Gln Phe Phe Thr Gln Thr Gly Leu Ile His Ser Gln Ser Asn Val
        515                 520                 525
Gln Gln Asn Val Cys His Gly Ala Met His Pro Thr Lys Pro Ser Gln
    530                 535                 540
His Ile Gly Thr Gly Asn Leu Tyr Ile Asp Ser Arg Gln Asn Leu Pro
545                 550                 555                 560
Pro Ser Val Met Pro Pro Pro Gly Tyr Pro His Ile Pro Gln Ala Leu
                565                 570                 575
Ser Thr Pro Gly Thr Thr Met Ala Gly His His Arg Ala Met Asn Gln
            580                 585                 590
Gln His Met Met Pro Ser Gln Ala Phe Gln Met Arg Arg Ser Leu Pro
        595                 600                 605
Pro Asp Asp Ile Gln Asp Asp Phe Asp Trp Asp Ser Ile Val
    610                 615                 620
```

<210> 222
<211> 441
<212> PRT
<213> Homo sapiens
<400> 222

```
Met Val Pro Pro Lys Leu His Val Leu Phe Cys Leu Cys Gly Cys Leu
1               5                  10                  15
Ala Val Val Tyr Pro Phe Asp Trp Gln Tyr Ile Asn Pro Val Ala His
            20                  25                  30
Met Lys Ser Ser Ala Trp Val Asn Lys Ile Gln Val Leu Met Ala Ala
        35                  40                  45
Ala Ser Phe Gly Gln Thr Lys Ile Pro Arg Gly Asn Gly Pro Tyr Ser
    50                  55                  60
Val Gly Cys Thr Asp Leu Met Phe Asp His Thr Asn Lys Gly Thr Phe
65                  70                  75                  80
Leu Arg Leu Tyr Tyr Pro Ser Gln Asp Asn Asp Arg Leu Asp Thr Leu
                85                  90                  95
Trp Ile Pro Asn Lys Glu Tyr Phe Trp Gly Leu Ser Lys Phe Leu Gly
            100                 105                 110
Thr His Trp Leu Met Gly Asn Ile Leu Arg Leu Leu Phe Gly Ser Met
        115                 120                 125
Thr Thr Pro Ala Asn Trp Asn Ser Pro Leu Arg Pro Gly Glu Lys Tyr
    130                 135                 140
Pro Leu Val Val Phe Ser His Gly Leu Gly Ala Phe Arg Thr Leu Tyr
145                 150                 155                 160
Ser Ala Ile Gly Ile Asp Leu Ala Ser His Gly Phe Ile Val Ala Ala
                165                 170                 175
Val Glu His Arg Asp Arg Ser Ala Ser Ala Thr Tyr Tyr Phe Lys Asp
            180                 185                 190
Gln Ser Ala Ala Glu Ile Gly Asp Lys Ser Trp Leu Tyr Leu Arg Thr
        195                 200                 205
Leu Lys Gln Glu Glu Glu Thr His Ile Arg Asn Glu Gln Val Arg Gln
    210                 215                 220
Arg Ala Lys Glu Cys Ser Gln Ala Leu Ser Leu Ile Leu Asp Ile Asp
225                 230                 235                 240
His Gly Lys Pro Val Lys Asn Ala Leu Asp Leu Lys Phe Asp Met Glu
                245                 250                 255
Gln Leu Lys Asp Ser Ile Asp Arg Glu Lys Ile Ala Val Ile Gly His
            260                 265                 270
Ser Phe Gly Gly Ala Thr Val Ile Gln Thr Leu Ser Glu Asp Gln Arg
        275                 280                 285
Phe Arg Cys Gly Ile Ala Leu Asp Ala Trp Met Phe Pro Leu Gly Asp
    290                 295                 300
Glu Val Tyr Ser Arg Ile Pro Gln Pro Leu Phe Phe Ile Asn Ser Glu
305                 310                 315                 320
Tyr Phe Gln Tyr Pro Ala Asn Ile Ile Lys Met Lys Lys Cys Tyr Ser
                325                 330                 335
Pro Asp Lys Glu Arg Lys Met Ile Thr Ile Arg Gly Ser Val His Gln
            340                 345                 350
Asn Phe Ala Asp Phe Thr Phe Ala Thr Gly Lys Ile Ile Gly His Met
```

```
        355                 360                 365
Leu Lys Leu Lys Gly Asp Ile Asp Ser Asn Ala Ala Ile Asp Leu Ser
    370                 375                 380
Asn Lys Ala Ser Leu Ala Phe Leu Gln Lys His Leu Gly Leu His Lys
385                 390                 395                 400
Asp Phe Asp Gln Trp Asp Cys Leu Ile Glu Gly Asp Asp Glu Asn Leu
                405                 410                 415
Ile Pro Gly Thr Asn Ile Asn Thr Thr Asn Gln His Ile Met Leu Gln
            420                 425                 430
Asn Ser Ser Gly Ile Glu Lys Tyr Asn
        435                 440
```

<210> 223
<211> 148
<212> PRT
<213> Homo sapiens
<400> 223

```
Met Arg Gly Arg Glu Leu Pro Leu Val Leu Leu Ala Leu Val Leu Cys
1               5                   10                  15
Leu Ala Pro Arg Gly Arg Ala Val Pro Leu Pro Ala Gly Gly Gly Thr
            20                  25                  30
Val Leu Thr Lys Met Tyr Pro Arg Gly Asn His Trp Ala Val Gly His
        35                  40                  45
Leu Met Gly Lys Lys Ser Thr Gly Glu Ser Ser Ser Val Ser Glu Arg
    50                  55                  60
Gly Ser Leu Lys Gln Gln Leu Arg Glu Tyr Ile Arg Trp Glu Glu Ala
65                  70                  75                  80
Ala Arg Asn Leu Leu Gly Leu Ile Glu Ala Lys Glu Asn Arg Asn His
                85                  90                  95
Gln Pro Pro Gln Pro Lys Ala Leu Gly Asn Gln Gln Pro Ser Trp Asp
            100                 105                 110
Ser Glu Asp Ser Ser Asn Phe Lys Asp Val Gly Ser Lys Gly Lys Val
        115                 120                 125
Gly Arg Leu Ser Ala Pro Gly Ser Gln Arg Glu Gly Arg Asn Pro Gln
    130                 135                 140
Leu Asn Gln Gln
145
```

<210> 224
<211> 491
<212> PRT
<213> Homo sapiens
<400> 224

```
Met Glu Leu Ser Val Leu Leu Phe Leu Ala Leu Leu Thr Gly Leu Leu
1               5                   10                  15
Leu Leu Leu Val Gln Arg His Pro Asn Thr His Asp Arg Leu Pro Pro
            20                  25                  30
Gly Pro Arg Pro Leu Pro Leu Leu Gly Asn Leu Leu Gln Met Asp Arg
        35                  40                  45
Arg Gly Leu Leu Lys Ser Phe Leu Arg Phe Arg Glu Lys Tyr Gly Asp
    50                  55                  60
Val Phe Thr Val His Leu Gly Pro Arg Pro Val Val Met Leu Cys Gly
65                  70                  75                  80
Val Glu Ala Ile Arg Glu Ala Leu Val Asp Lys Ala Glu Ala Phe Ser
                85                  90                  95
Gly Arg Gly Lys Ile Ala Met Val Asp Pro Phe Phe Arg Gly Tyr Gly
            100                 105                 110
Val Ile Phe Ala Asn Gly Asn Arg Trp Lys Val Leu Arg Arg Phe Ser
        115                 120                 125
Val Thr Thr Met Arg Asp Phe Gly Met Gly Lys Arg Ser Val Glu Glu
    130                 135                 140
Arg Ile Gln Glu Glu Ala Gln Cys Leu Ile Glu Glu Leu Arg Lys Ser
145                 150                 155                 160
Lys Gly Ala Leu Met Asp Pro Thr Phe Leu Phe Gln Ser Ile Thr Ala
                165                 170                 175
Asn Ile Ile Cys Ser Ile Val Phe Gly Lys Arg Phe His Tyr Gln Asp
            180                 185                 190
Gln Glu Phe Leu Lys Met Leu Asn Leu Phe Tyr Gln Thr Phe Ser Leu
        195                 200                 205
```

```
Ile Ser Ser Val Phe Gly Gln Leu Phe Glu Leu Phe Ser Gly Phe Leu
    210                 215                 220
Lys Tyr Phe Pro Gly Ala His Arg Gln Val Tyr Lys Asn Leu Gln Glu
225                 230                 235                 240
Ile Asn Ala Tyr Ile Gly His Ser Val Glu Lys His Arg Glu Thr Leu
                245                 250                 255
Asp Pro Ser Ala Pro Lys Asp Leu Ile Asp Thr Tyr Leu Leu His Met
            260                 265                 270
Glu Lys Glu Lys Ser Asn Ala His Ser Glu Phe Ser His Gln Asn Leu
        275                 280                 285
Asn Leu Asn Thr Leu Ser Leu Phe Phe Ala Gly Thr Glu Thr Thr Ser
    290                 295                 300
Thr Thr Leu Arg Tyr Gly Phe Leu Leu Met Leu Lys Tyr Pro His Val
305                 310                 315                 320
Ala Glu Arg Val Tyr Arg Glu Ile Glu Gln Val Ile Gly Pro His Arg
                325                 330                 335
Pro Pro Glu Leu His Asp Arg Ala Lys Met Pro Tyr Thr Glu Ala Val
            340                 345                 350
Ile Tyr Glu Ile Gln Arg Phe Ser Asp Leu Leu Pro Met Gly Val Pro
        355                 360                 365
His Ile Val Thr Gln His Thr Ser Phe Arg Gly Tyr Ile Ile Pro Lys
    370                 375                 380
Asp Thr Glu Val Phe Leu Ile Leu Ser Thr Ala Leu His Asp Pro His
385                 390                 395                 400
Tyr Phe Glu Lys Pro Asp Ala Phe Asn Pro Asp His Phe Leu Asp Ala
                405                 410                 415
Asn Gly Ala Leu Lys Lys Thr Glu Ala Phe Ile Pro Phe Ser Leu Gly
            420                 425                 430
Lys Arg Ile Cys Leu Gly Glu Gly Ile Ala Arg Ala Glu Leu Phe Leu
        435                 440                 445
Phe Phe Thr Thr Ile Leu Gln Asn Phe Ser Met Ala Ser Pro Val Ala
    450                 455                 460
Pro Glu Asp Ile Asp Leu Thr Pro Gln Glu Cys Gly Val Gly Lys Ile
465                 470                 475                 480
Pro Pro Thr Tyr Gln Ile Arg Phe Leu Pro Arg
                485                 490
```

<210> 225
<211> 359
<212> PRT
<213> Homo sapiens
<400> 225

```
Met Val Arg Pro Met Leu Leu Leu Ser Leu Gly Leu Leu Ala Gly Leu
1               5                   10                  15
Leu Pro Ala Leu Ala Ala Cys Pro Gln Asn Cys His Cys His Ser Asp
            20                  25                  30
Leu Gln His Val Ile Cys Asp Lys Val Gly Leu Gln Lys Ile Pro Lys
        35                  40                  45
Val Ser Glu Lys Thr Lys Leu Leu Asn Leu Gln Arg Asn Asn Phe Pro
    50                  55                  60
Val Leu Ala Ala Asn Ser Phe Arg Ala Met Pro Asn Leu Val Ser Leu
65                  70                  75                  80
His Leu Gln His Cys Gln Ile Arg Glu Val Ala Ala Gly Ala Phe Arg
                85                  90                  95
Gly Leu Lys Gln Leu Ile Tyr Leu Tyr Leu Ser His Asn Asp Ile Arg
            100                 105                 110
Val Val Arg Ala Gly Ala Phe Asp Asp Leu Thr Glu Leu Thr Tyr Leu
        115                 120                 125
Tyr Leu Asp His Asn Lys Val Thr Glu Leu Pro Arg Gly Leu Leu Ser
    130                 135                 140
Pro Leu Val Asn Leu Phe Ile Leu Gln Leu Asn Asn Asn Lys Ile Arg
145                 150                 155                 160
Glu Leu Arg Ala Gly Pro Phe Gln Gly Ala Lys Asp Leu Arg Trp Leu
                165                 170                 175
Tyr Leu Ser Glu Asn Ala Leu Ser Ser Leu Gln Pro Gly Ala Leu Asp
            180                 185                 190
Asp Val Glu Asn Leu Ala Lys Phe His Val Asp Arg Asn Gln Leu Ser
        195                 200                 205
Ser Tyr Pro Ser Ala Ala Leu Ser Lys Leu Arg Val Val Glu Glu Leu
```

```
    210                 215                 220
Lys Leu Ser His Asn Pro Leu Lys Ser Ile Pro Asp Asn Ala Phe Gln
225                 230                 235                 240
Ser Phe Gly Arg Tyr Leu Glu Thr Leu Trp Leu Asp Asn Thr Asn Leu
                245                 250                 255
Glu Lys Phe Ser Asp Gly Ala Phe Leu Gly Val Thr Thr Leu Lys His
            260                 265                 270
Val His Leu Glu Asn Asn Arg Leu Asn Gln Leu Pro Ser Asn Phe Pro
        275                 280                 285
Phe Asp Ser Leu Glu Thr Leu Ala Leu Thr Asn Asn Pro Trp Lys Cys
    290                 295                 300
Thr Cys Gln Leu Arg Gly Leu Arg Arg Trp Leu Glu Ala Lys Ala Ser
305                 310                 315                 320
Arg Pro Asp Ala Thr Cys Ala Ser Pro Ala Lys Phe Lys Gly Gln His
                325                 330                 335
Ile Arg Asp Thr Asp Ala Phe Arg Ser Cys Lys Phe Pro Thr Lys Arg
            340                 345                 350
Ser Lys Lys Ala Gly Arg His
        355
```

<210> 226
<211> 276
<212> PRT
<213> Homo sapiens
<400> 226

```
Met Leu Ala Trp Arg Asp Gly Glu Leu Glu Ala Glu Thr Ser Ser Ser
1               5                   10                  15
Leu Phe Leu Leu Ala Met Gln Val Trp Met Cys Gly Gly Arg Met Glu
            20                  25                  30
Asp Ile Pro Cys Ser Arg Val Gly His Ile Tyr Arg Lys Tyr Val Pro
        35                  40                  45
Tyr Lys Val Pro Ala Gly Val Ser Leu Ala Arg Val Arg Thr Leu Lys
    50                  55                  60
Arg Val Ala Glu Val Trp Met Asp Glu Tyr Ala Glu Tyr Ile Tyr Gln
65                  70                  75                  80
Arg Arg Pro Glu Tyr Arg His Leu Ser Ala Gly Asp Val Ala Val Gln
                85                  90                  95
Lys Lys Leu Arg Ser Ser Leu Asn Cys Lys Ser Phe Lys Trp Phe Met
            100                 105                 110
Thr Lys Ile Ala Trp Asp Leu Pro Lys Phe Tyr Pro Pro Val Glu Pro
        115                 120                 125
Pro Ala Ala Ala Trp Gly Glu Ile Arg Asn Val Gly Thr Gly Leu Cys
    130                 135                 140
Ala Asp Thr Lys His Gly Ala Leu Gly Ser Pro Leu Arg Leu Glu Gly
145                 150                 155                 160
Cys Val Arg Gly Arg Gly Glu Ala Ala Trp Asn Asn Met Gln Val Phe
                165                 170                 175
Thr Phe Thr Trp Arg Glu Asp Ile Arg Pro Gly Asp Pro Gln His Thr
            180                 185                 190
Lys Lys Phe Cys Phe Asp Ala Ile Ser His Thr Ser Pro Val Thr Leu
        195                 200                 205
Tyr Asp Cys His Ser Met Lys Gly Asn Gln Leu Trp Lys Tyr Arg Lys
    210                 215                 220
Asp Lys Thr Leu Tyr His Pro Val Ser Gly Ser Cys Met Asp Cys Ser
225                 230                 235                 240
Glu Ser Asp His Arg Ile Phe Met Asn Thr Cys Asn Pro Ser Ser Leu
                245                 250                 255
Thr Gln Gln Trp Leu Phe Glu His Thr Asn Ser Thr Val Leu Glu Lys
            260                 265                 270
Phe Asn Arg Asn
        275
```

<210> 227
<211> 161
<212> PRT
<213> Homo sapiens
<400> 227

```
Met Thr Leu Glu Glu Leu Val Ala Cys Asp Asn Ala Ala Gln Lys Met
1               5                   10                  15
```

```
Gln Thr Val Thr Ala Ala Val Glu Glu Leu Leu Val Ala Ala Gln Arg
            20                  25                  30
Gln Asp Arg Leu Thr Val Gly Val Tyr Glu Ser Ala Lys Leu Met Asn
        35                  40                  45
Val Asp Pro Asp Ser Val Val Leu Cys Leu Leu Ala Ile Asp Glu Glu
    50                  55                  60
Glu Glu Asp Asp Ile Ala Leu Gln Ile His Phe Thr Leu Ile Gln Ser
65                  70                  75                  80
Phe Cys Cys Asp Asn Asp Ile Asn Ile Val Arg Val Ser Gly Asn Ala
                85                  90                  95
Arg Leu Ala Gln Leu Leu Gly Glu Pro Ala Glu Thr Gln Gly Thr Thr
            100                 105                 110
Glu Ala Arg Asp Leu His Cys Leu Pro Phe Leu Gln Asn Pro His Thr
        115                 120                 125
Asp Ala Trp Lys Ser His Gly Leu Val Glu Val Ala Ser Tyr Cys Glu
    130                 135                 140
Glu Ser Arg Gly Asn Asn Gln Trp Val Pro Tyr Ile Ser Leu Gln Glu
145                 150                 155                 160
Arg
```

<210> 228
<211> 281
<212> PRT
<213> Homo sapiens
<400> 228

```
Met Ala Ser Arg Gly Arg Arg Pro Glu His Gly Gly Pro Pro Glu Leu
1               5                   10                  15
Phe Tyr Asp Glu Thr Glu Ala Arg Lys Tyr Val Arg Asn Ser Arg Met
            20                  25                  30
Ile Asp Ile Gln Thr Arg Met Ala Gly Arg Ala Leu Glu Leu Leu Tyr
        35                  40                  45
Leu Pro Glu Asn Lys Pro Cys Tyr Leu Leu Asp Ile Gly Cys Gly Thr
    50                  55                  60
Gly Leu Ser Gly Ser Tyr Leu Ser Asp Glu Gly His Tyr Trp Val Gly
65                  70                  75                  80
Leu Asp Ile Ser Pro Ala Met Leu Asp Glu Ala Val Asp Arg Glu Ile
                85                  90                  95
Glu Gly Asp Leu Leu Leu Gly Asp Met Gly Gln Gly Ile Pro Phe Lys
            100                 105                 110
Pro Gly Thr Phe Asp Gly Cys Ile Ser Ile Ser Ala Val Gln Trp Leu
        115                 120                 125
Cys Asn Ala Asn Lys Lys Ser Glu Asn Pro Ala Lys Arg Leu Tyr Cys
    130                 135                 140
Phe Phe Ala Ser Leu Phe Ser Val Leu Val Arg Gly Ser Arg Ala Val
145                 150                 155                 160
Leu Gln Leu Tyr Pro Glu Asn Ser Glu Gln Leu Glu Leu Ile Thr Thr
                165                 170                 175
Gln Ala Thr Lys Ala Gly Phe Ser Gly Gly Met Val Val Asp Tyr Pro
            180                 185                 190
Asn Ser Ala Lys Ala Lys Lys Phe Tyr Leu Cys Leu Phe Ser Gly Pro
        195                 200                 205
Ser Thr Phe Ile Pro Glu Gly Leu Ser Glu Asn Gln Asp Glu Val Glu
    210                 215                 220
Pro Arg Glu Ser Val Phe Thr Asn Glu Arg Phe Pro Leu Arg Met Ser
225                 230                 235                 240
Arg Arg Gly Met Val Arg Lys Ser Arg Ala Trp Val Leu Glu Lys Lys
                245                 250                 255
Glu Arg His Arg Arg Gln Gly Arg Glu Val Arg Pro Asp Thr Gln Tyr
            260                 265                 270
Thr Gly Arg Lys Arg Lys Pro Arg Phe
        275                 280
```

<210> 229
<211> 525
<212> PRT
<213> Homo sapiens
<400> 229

```
Met Ala Ala Gly Gly Ser Gly Gly Arg Ala Ser Cys Pro Pro Gly Val
```

```
1               5                   10                  15
Gly Val Gly Pro Gly Thr Gly Gly Ser Pro Gly Pro Ser Ala Asn Ala
            20                  25                  30
Ala Ala Thr Pro Ala Pro Gly Asn Ala Ala Ala Ala Ala Ala Ala Ala
        35                  40                  45
Ala Ala Ala Ala Ala Ala Pro Gly Pro Thr Pro Pro Ala Pro Pro Gly
    50                  55                  60
Pro Gly Thr Asp Ala Gln Ala Ala Gly Ala Glu Arg Ala Glu Glu Ala
65                  70                  75                  80
Ala Gly Pro Gly Ala Ala Ala Leu Gln Arg Glu Ala Ala Tyr Asn Trp
                85                  90                  95
Gln Ala Ser Lys Pro Thr Val Gln Glu Arg Phe Ala Phe Leu Phe Asn
            100                 105                 110
Asn Glu Val Leu Cys Asp Val His Phe Leu Val Gly Lys Gly Leu Ser
        115                 120                 125
Ser Gln Arg Ile Pro Ala His Arg Phe Val Leu Ala Val Gly Ser Ala
    130                 135                 140
Val Phe Asp Ala Met Phe Asn Gly Gly Met Ala Thr Thr Ser Thr Glu
145                 150                 155                 160
Ile Glu Leu Pro Asp Val Glu Pro Ala Ala Phe Leu Ala Leu Leu Lys
                165                 170                 175
Phe Leu Tyr Ser Asp Glu Val Gln Ile Gly Pro Glu Thr Val Met Thr
            180                 185                 190
Thr Leu Tyr Thr Ala Lys Lys Tyr Ala Val Pro Ala Leu Glu Ala His
        195                 200                 205
Cys Val Glu Phe Leu Lys Lys Asn Leu Arg Ala Asp Asn Ala Phe Met
    210                 215                 220
Leu Leu Thr Gln Ala Arg Leu Phe Asp Glu Pro Gln Leu Ala Ser Leu
225                 230                 235                 240
Cys Leu Glu Asn Ile Asp Lys Asn Thr Ala Asp Ala Ile Thr Ala Glu
                245                 250                 255
Gly Phe Thr Asp Ile Asp Leu Asp Thr Leu Val Ala Val Leu Glu Arg
            260                 265                 270
Asp Thr Leu Gly Ile Arg Glu Val Arg Leu Phe Asn Ala Val Val Arg
        275                 280                 285
Trp Ser Glu Ala Glu Cys Gln Arg Gln Gln Leu Gln Val Thr Pro Glu
    290                 295                 300
Asn Arg Arg Lys Val Leu Gly Lys Ala Leu Gly Leu Ile Arg Phe Pro
305                 310                 315                 320
Leu Met Thr Ile Glu Glu Phe Ala Ala Gly Pro Ala Gln Ser Gly Ile
                325                 330                 335
Leu Val Asp Arg Glu Val Val Ser Leu Phe Leu His Phe Thr Val Asn
            340                 345                 350
Pro Lys Pro Arg Val Glu Phe Ile Asp Arg Pro Arg Cys Cys Leu Arg
        355                 360                 365
Gly Lys Glu Cys Ser Ile Asn Arg Phe Gln Gln Val Glu Ser Arg Trp
    370                 375                 380
Gly Tyr Ser Gly Thr Ser Asp Arg Ile Arg Phe Ser Val Asn Lys Arg
385                 390                 395                 400
Ile Phe Val Val Gly Phe Gly Leu Tyr Gly Ser Ile His Gly Pro Thr
                405                 410                 415
Asp Tyr Gln Val Asn Ile Gln Ile Ile His Thr Asp Ser Asn Thr Val
            420                 425                 430
Leu Gly Gln Asn Asp Thr Gly Phe Ser Cys Asp Gly Ser Ala Ser Thr
        435                 440                 445
Phe Arg Val Met Phe Lys Glu Pro Val Glu Val Leu Pro Asn Val Asn
    450                 455                 460
Tyr Thr Ala Cys Ala Thr Leu Lys Gly Pro Asp Ser His Tyr Gly Thr
465                 470                 475                 480
Lys Gly Leu Arg Lys Val Thr His Glu Ser Pro Thr Thr Gly Ala Lys
                485                 490                 495
Thr Cys Phe Thr Phe Cys Tyr Ala Ala Gly Asn Asn Asn Gly Thr Ser
            500                 505                 510
Val Glu Asp Gly Gln Ile Pro Glu Val Ile Phe Tyr Thr
        515                 520                 525
```

<210> 230
<211> 933
<212> PRT

<213> Homo sapiens
<400> 230

```
Met Thr Glu Leu Lys Ala Lys Gly Pro Arg Ala Pro His Val Ala Gly
1               5                  10                  15
Gly Pro Pro Ser Pro Glu Val Gly Ser Pro Leu Leu Cys Arg Pro Ala
            20                  25                  30
Ala Gly Pro Phe Pro Gly Ser Gln Thr Ser Asp Thr Leu Pro Glu Val
        35                  40                  45
Ser Ala Ile Pro Ile Ser Leu Asp Gly Leu Leu Phe Pro Arg Pro Cys
    50                  55                  60
Gln Gly Gln Asp Pro Ser Asp Glu Lys Thr Gln Asp Gln Gln Ser Leu
65                  70                  75                  80
Ser Asp Val Glu Gly Ala Tyr Ser Arg Ala Glu Ala Thr Arg Gly Ala
                85                  90                  95
Gly Gly Ser Ser Ser Ser Pro Pro Glu Lys Asp Ser Gly Leu Leu Asp
            100                 105                 110
Ser Val Leu Asp Thr Leu Leu Ala Pro Ser Gly Pro Gly Gln Ser Gln
        115                 120                 125
Pro Ser Pro Pro Ala Cys Glu Val Thr Ser Ser Trp Cys Leu Phe Gly
    130                 135                 140
Pro Glu Leu Pro Glu Asp Pro Pro Ala Ala Pro Ala Thr Gln Arg Val
145                 150                 155                 160
Leu Ser Pro Leu Met Ser Arg Ser Gly Cys Lys Val Gly Asp Ser Ser
                165                 170                 175
Gly Thr Ala Ala Ala His Lys Val Leu Pro Arg Gly Leu Ser Pro Ala
            180                 185                 190
Arg Gln Leu Leu Leu Pro Ala Ser Glu Ser Pro His Trp Ser Gly Ala
        195                 200                 205
Pro Val Lys Pro Ser Pro Gln Ala Ala Ala Val Glu Val Glu Glu Glu
    210                 215                 220
Asp Ser Ser Glu Ser Glu Glu Ser Ala Gly Pro Leu Leu Lys Gly Lys
225                 230                 235                 240
Pro Arg Ala Leu Gly Gly Ala Ala Ala Gly Gly Gly Ala Ala Ala Cys
                245                 250                 255
Pro Pro Gly Ala Ala Ala Gly Gly Val Ala Leu Val Pro Lys Glu Asp
            260                 265                 270
Ser Arg Phe Ser Ala Pro Arg Val Ala Leu Val Glu Gln Asp Ala Pro
        275                 280                 285
Met Ala Pro Gly Arg Ser Pro Leu Ala Thr Thr Val Met Asp Phe Ile
    290                 295                 300
His Val Pro Ile Leu Pro Leu Asn His Ala Leu Leu Ala Ala Arg Thr
305                 310                 315                 320
Arg Gln Leu Leu Glu Asp Glu Ser Tyr Asp Gly Gly Ala Gly Ala Ala
                325                 330                 335
Ser Ala Phe Ala Pro Pro Arg Thr Ser Pro Cys Ala Ser Ser Thr Pro
            340                 345                 350
Val Ala Val Gly Asp Phe Pro Asp Cys Ala Tyr Pro Pro Asp Ala Glu
        355                 360                 365
Pro Lys Asp Asp Ala Tyr Pro Leu Tyr Ser Asp Phe Gln Pro Pro Ala
    370                 375                 380
Leu Lys Ile Lys Glu Glu Glu Glu Gly Ala Glu Ala Ser Ala Arg Ser
385                 390                 395                 400
Pro Arg Ser Tyr Leu Val Ala Gly Ala Asn Pro Ala Ala Phe Pro Asp
                405                 410                 415
Phe Pro Leu Gly Pro Pro Pro Pro Leu Pro Pro Arg Ala Thr Pro Ser
            420                 425                 430
Arg Pro Gly Glu Ala Ala Val Thr Ala Ala Pro Ala Ser Ala Ser Val
        435                 440                 445
Ser Ser Ala Ser Ser Ser Gly Ser Thr Leu Glu Cys Ile Leu Tyr Lys
    450                 455                 460
Ala Glu Gly Ala Pro Pro Gln Gln Gly Pro Phe Ala Pro Pro Pro Cys
465                 470                 475                 480
Lys Ala Pro Gly Ala Ser Gly Cys Leu Leu Pro Arg Asp Gly Leu Pro
                485                 490                 495
Ser Thr Ser Ala Ser Ala Ala Ala Ala Gly Ala Ala Pro Ala Leu Tyr
            500                 505                 510
Pro Ala Leu Gly Leu Asn Gly Leu Pro Gln Leu Gly Tyr Gln Ala Ala
        515                 520                 525
Val Leu Lys Glu Gly Leu Pro Gln Val Tyr Pro Pro Tyr Leu Asn Tyr
```

```
    530                 535                 540
Leu Arg Pro Asp Ser Glu Ala Ser Gln Ser Pro Gln Tyr Ser Phe Glu
545                 550                 555                 560
Ser Leu Pro Gln Lys Ile Cys Leu Ile Cys Gly Asp Glu Ala Ser Gly
                565                 570                 575
Cys His Tyr Gly Val Leu Thr Cys Gly Ser Cys Lys Val Phe Phe Lys
            580                 585                 590
Arg Ala Met Glu Gly Gln His Asn Tyr Leu Cys Ala Gly Arg Asn Asp
        595                 600                 605
Cys Ile Val Asp Lys Ile Arg Arg Lys Asn Cys Pro Ala Cys Arg Leu
    610                 615                 620
Arg Lys Cys Cys Gln Ala Gly Met Val Leu Gly Gly Arg Lys Phe Lys
625                 630                 635                 640
Lys Phe Asn Lys Val Arg Val Val Arg Ala Leu Asp Ala Val Ala Leu
                645                 650                 655
Pro Gln Pro Leu Gly Val Pro Asn Glu Ser Gln Ala Leu Ser Gln Arg
            660                 665                 670
Phe Thr Phe Ser Pro Gly Gln Asp Ile Gln Leu Ile Pro Pro Leu Ile
        675                 680                 685
Asn Leu Leu Met Ser Ile Glu Pro Asp Val Ile Tyr Ala Gly His Asp
    690                 695                 700
Asn Thr Lys Pro Asp Thr Ser Ser Ser Leu Leu Thr Ser Leu Asn Gln
705                 710                 715                 720
Leu Gly Glu Arg Gln Leu Leu Ser Val Val Lys Trp Ser Lys Ser Leu
                725                 730                 735
Pro Gly Phe Arg Asn Leu His Ile Asp Asp Gln Ile Thr Leu Ile Gln
            740                 745                 750
Tyr Ser Trp Met Ser Leu Met Val Phe Gly Leu Gly Trp Arg Ser Tyr
        755                 760                 765
Lys His Val Ser Gly Gln Met Leu Tyr Phe Ala Pro Asp Leu Ile Leu
    770                 775                 780
Asn Glu Gln Arg Met Lys Glu Ser Ser Phe Tyr Ser Leu Cys Leu Thr
785                 790                 795                 800
Met Trp Gln Ile Pro Gln Glu Phe Val Lys Leu Gln Val Ser Gln Glu
                805                 810                 815
Glu Phe Leu Cys Met Lys Val Leu Leu Leu Leu Asn Thr Ile Pro Leu
            820                 825                 830
Glu Gly Leu Arg Ser Gln Thr Gln Phe Glu Glu Met Arg Ser Ser Tyr
        835                 840                 845
Ile Arg Glu Leu Ile Lys Ala Ile Gly Leu Arg Gln Lys Gly Val Val
    850                 855                 860
Ser Ser Ser Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Asn Leu
865                 870                 875                 880
His Asp Leu Val Lys Gln Leu His Leu Tyr Cys Leu Asn Thr Phe Ile
                885                 890                 895
Gln Ser Arg Ala Leu Ser Val Glu Phe Pro Glu Met Met Ser Glu Val
            900                 905                 910
Ile Ala Ala Gln Leu Pro Lys Ile Leu Ala Gly Met Val Lys Pro Leu
        915                 920                 925
Leu Phe His Lys Lys
    930
```

<210> 231
<211> 186
<212> PRT
<213> Homo sapiens
<400> 231

```
Met Asp Ala Asp Ser Asp Val Ala Leu Asp Ile Leu Ile Thr Asn Val
1               5                  10                  15
Val Cys Val Phe Arg Thr Arg Cys His Leu Asn Leu Arg Lys Ile Ala
            20                  25                  30
Leu Glu Gly Ala Asn Val Ile Tyr Lys Arg Asp Val Gly Lys Val Leu
        35                  40                  45
Met Lys Leu Arg Lys Pro Arg Ile Thr Ala Thr Ile Trp Ser Ser Gly
    50                  55                  60
Lys Ile Ile Cys Thr Gly Ala Thr Ser Glu Glu Glu Ala Lys Phe Gly
65                  70                  75                  80
Ala Arg Arg Leu Ala Arg Ser Leu Gln Lys Leu Gly Phe Gln Val Ile
                85                  90                  95
```

```
Phe Thr Asp Phe Lys Val Val Asn Val Leu Ala Val Cys Asn Met Pro
            100                 105                 110
Phe Glu Ile Arg Leu Pro Glu Phe Thr Lys Asn Asn Arg Pro His Ala
        115                 120                 125
Ser Tyr Glu Pro Glu Leu His Pro Ala Val Cys Tyr Arg Ile Lys Ser
    130                 135                 140
Leu Arg Ala Thr Leu Gln Ile Phe Ser Thr Gly Ser Ile Thr Val Thr
145                 150                 155                 160
Gly Pro Asn Val Lys Ala Val Ala Thr Ala Val Glu Gln Ile Tyr Pro
                165                 170                 175
Phe Val Phe Glu Ser Arg Lys Glu Ile Leu
            180                 185
```

<210> 232
<211> 1744
<212> PRT
<213> Homo sapiens
<400> 232

```
Met Arg Leu Leu Trp Gly Leu Ile Trp Ala Ser Ser Phe Phe Thr Leu
1               5                   10                  15
Ser Leu Gln Lys Pro Arg Leu Leu Leu Phe Ser Pro Ser Val Val His
            20                  25                  30
Leu Gly Val Pro Leu Ser Val Gly Val Gln Leu Gln Asp Val Pro Arg
        35                  40                  45
Gly Gln Val Val Lys Gly Ser Val Phe Leu Arg Asn Pro Ser Arg Asn
    50                  55                  60
Asn Val Pro Cys Ser Pro Lys Val Asp Phe Thr Leu Ser Ser Glu Arg
65                  70                  75                  80
Asp Phe Ala Leu Leu Ser Leu Gln Val Pro Leu Lys Asp Ala Lys Ser
                85                  90                  95
Cys Gly Leu His Gln Leu Leu Arg Gly Pro Glu Val Gln Leu Val Ala
            100                 105                 110
His Ser Pro Trp Leu Lys Asp Ser Leu Ser Arg Thr Thr Asn Ile Gln
        115                 120                 125
Gly Ile Asn Leu Leu Phe Ser Ser Arg Arg Gly His Leu Phe Leu Gln
    130                 135                 140
Thr Asp Gln Pro Ile Tyr Asn Pro Gly Gln Arg Val Arg Tyr Arg Val
145                 150                 155                 160
Phe Ala Leu Asp Gln Lys Met Arg Pro Ser Thr Asp Thr Ile Thr Val
                165                 170                 175
Met Val Glu Asn Ser His Gly Leu Arg Val Arg Lys Lys Glu Val Tyr
            180                 185                 190
Met Pro Ser Ser Ile Phe Gln Asp Asp Phe Val Ile Pro Asp Ile Ser
        195                 200                 205
Glu Pro Gly Thr Trp Lys Ile Ser Ala Arg Phe Ser Asp Gly Leu Glu
    210                 215                 220
Ser Asn Ser Ser Thr Gln Phe Glu Val Lys Lys Tyr Val Leu Pro Asn
225                 230                 235                 240
Phe Glu Val Lys Ile Thr Pro Gly Lys Pro Tyr Ile Leu Thr Val Pro
                245                 250                 255
Gly His Leu Asp Glu Met Gln Leu Asp Ile Gln Ala Arg Tyr Ile Tyr
            260                 265                 270
Gly Lys Pro Val Gln Gly Val Ala Tyr Val Arg Phe Gly Leu Leu Asp
        275                 280                 285
Glu Asp Gly Lys Lys Thr Phe Phe Arg Gly Leu Glu Ser Gln Thr Lys
    290                 295                 300
Leu Val Asn Gly Gln Ser His Ile Ser Leu Ser Lys Ala Glu Phe Gln
305                 310                 315                 320
Asp Ala Leu Glu Lys Leu Asn Met Gly Ile Thr Asp Leu Gln Gly Leu
                325                 330                 335
Arg Leu Tyr Val Ala Ala Ala Ile Ile Glu Tyr Pro Gly Gly Glu Met
            340                 345                 350
Glu Glu Ala Glu Leu Thr Ser Trp Tyr Phe Val Ser Ser Pro Phe Ser
        355                 360                 365
Leu Asp Leu Ser Lys Thr Lys Arg His Leu Val Pro Gly Ala Pro Phe
    370                 375                 380
Leu Leu Gln Ala Leu Val Arg Glu Met Ser Gly Ser Pro Ala Ser Gly
385                 390                 395                 400
Ile Pro Val Lys Val Ser Ala Thr Val Ser Ser Pro Gly Ser Val Pro
```

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                405                 410                 415
Glu Val Gln Asp Ile Gln Gln Asn Thr Asp Gly Ser Gly Gln Val Ser
            420                 425                 430
Ile Pro Ile Ile Ile Pro Gln Thr Ile Ser Glu Leu Gln Leu Ser Val
        435                 440                 445
Ser Ala Gly Ser Pro His Pro Ala Ile Ala Arg Leu Thr Val Ala Ala
    450                 455                 460
Pro Pro Ser Gly Gly Pro Gly Phe Leu Ser Ile Glu Arg Pro Asp Ser
465                 470                 475                 480
Arg Pro Pro Arg Val Gly Asp Thr Leu Asn Leu Asn Leu Arg Ala Val
                485                 490                 495
Gly Ser Gly Ala Thr Phe Ser His Tyr Tyr Tyr Met Ile Leu Ser Arg
            500                 505                 510
Gly Gln Ile Val Phe Met Asn Arg Glu Pro Lys Arg Thr Leu Thr Ser
        515                 520                 525
Val Ser Val Phe Val Asp His His Leu Ala Pro Ser Phe Tyr Phe Val
    530                 535                 540
Ala Phe Tyr Tyr His Gly Asp His Pro Val Ala Asn Ser Leu Arg Val
545                 550                 555                 560
Asp Val Gln Ala Gly Ala Cys Glu Gly Lys Leu Glu Leu Ser Val Asp
                565                 570                 575
Gly Ala Lys Gln Tyr Arg Asn Gly Glu Ser Val Lys Leu His Leu Glu
            580                 585                 590
Thr Asp Ser Leu Ala Leu Val Ala Leu Gly Ala Leu Asp Thr Ala Leu
        595                 600                 605
Tyr Ala Ala Gly Ser Lys Ser His Lys Pro Leu Asn Met Gly Lys Val
    610                 615                 620
Phe Glu Ala Met Asn Ser Tyr Asp Leu Gly Cys Gly Pro Gly Gly Gly
625                 630                 635                 640
Asp Ser Ala Leu Gln Val Phe Gln Ala Ala Gly Leu Ala Phe Ser Asp
                645                 650                 655
Gly Asp Gln Trp Thr Leu Ser Arg Lys Arg Leu Ser Cys Pro Lys Glu
            660                 665                 670
Lys Thr Thr Arg Lys Lys Arg Asn Val Asn Phe Gln Lys Ala Ile Asn
        675                 680                 685
Glu Lys Leu Gly Gln Tyr Ala Ser Pro Thr Ala Lys Arg Cys Cys Gln
    690                 695                 700
Asp Gly Val Thr Arg Leu Pro Met Met Arg Ser Cys Glu Gln Arg Ala
705                 710                 715                 720
Ala Arg Val Gln Gln Pro Asp Cys Arg Glu Pro Phe Leu Ser Cys Cys
                725                 730                 735
Gln Phe Ala Glu Ser Leu Arg Lys Lys Ser Arg Asp Lys Gly Gln Ala
            740                 745                 750
Gly Leu Gln Arg Ala Leu Glu Ile Leu Gln Glu Glu Asp Leu Ile Asp
        755                 760                 765
Glu Asp Asp Ile Pro Val Arg Ser Phe Phe Pro Glu Asn Trp Leu Trp
    770                 775                 780
Arg Val Glu Thr Val Asp Arg Phe Gln Ile Leu Thr Leu Trp Leu Pro
785                 790                 795                 800
Asp Ser Leu Thr Thr Trp Glu Ile His Gly Leu Ser Leu Ser Lys Thr
                805                 810                 815
Lys Gly Leu Cys Val Ala Thr Pro Val Gln Leu Arg Val Phe Arg Glu
            820                 825                 830
Phe His Leu His Leu Arg Leu Pro Met Ser Val Arg Arg Phe Glu Gln
        835                 840                 845
Leu Glu Leu Arg Pro Val Leu Tyr Asn Tyr Leu Asp Lys Asn Leu Thr
    850                 855                 860
Val Ser Val His Val Ser Pro Val Glu Gly Leu Cys Leu Ala Gly Gly
865                 870                 875                 880
Gly Gly Leu Ala Gln Gln Val Leu Val Pro Ala Gly Ser Ala Arg Pro
                885                 890                 895
Val Ala Phe Ser Val Val Pro Thr Ala Ala Ala Ala Val Ser Leu Lys
            900                 905                 910
Val Val Ala Arg Gly Ser Phe Glu Phe Pro Val Gly Asp Ala Val Ser
        915                 920                 925
Lys Val Leu Gln Ile Glu Lys Glu Gly Ala Ile His Arg Glu Glu Leu
    930                 935                 940
Val Tyr Glu Leu Asn Pro Leu Asp His Arg Gly Arg Thr Leu Glu Ile
945                 950                 955                 960
```

Pro Gly Asn Ser Asp Pro Asn Met Ile Pro Asp Gly Asp Phe Asn Ser
965 970 975
Tyr Val Arg Val Thr Ala Ser Asp Pro Leu Asp Thr Leu Gly Ser Glu
980 985 990
Gly Ala Leu Ser Pro Gly Gly Val Ala Ser Leu Leu Arg Leu Pro Arg
995 1000 1005
Gly Cys Gly Glu Gln Thr Met Ile Tyr Leu Ala Pro Thr Leu Ala
1010 1015 1020
Ala Ser Arg Tyr Leu Asp Lys Thr Glu Gln Trp Ser Thr Leu Pro
1025 1030 1035
Pro Glu Thr Lys Asp His Ala Val Asp Leu Ile Gln Lys Gly Tyr
1040 1045 1050
Met Arg Ile Gln Gln Phe Arg Lys Ala Asp Gly Ser Tyr Ala Ala
1055 1060 1065
Trp Leu Ser Arg Gly Ser Ser Thr Trp Leu Thr Ala Phe Val Leu
1070 1075 1080
Lys Val Leu Ser Leu Ala Gln Glu Gln Val Gly Gly Ser Pro Glu
1085 1090 1095
Lys Leu Gln Glu Thr Ser Asn Trp Leu Leu Ser Gln Gln Gln Ala
1100 1105 1110
Asp Gly Ser Phe Gln Asp Leu Ser Pro Val Ile His Arg Ser Met
1115 1120 1125
Gln Gly Gly Leu Val Gly Asn Asp Glu Thr Val Ala Leu Thr Ala
1130 1135 1140
Phe Val Thr Ile Ala Leu His His Gly Leu Ala Val Phe Gln Asp
1145 1150 1155
Glu Gly Ala Glu Pro Leu Lys Gln Arg Val Glu Ala Ser Ile Ser
1160 1165 1170
Lys Ala Ser Ser Phe Leu Gly Glu Lys Ala Ser Ala Gly Leu Leu
1175 1180 1185
Gly Ala His Ala Ala Ala Ile Thr Ala Tyr Ala Leu Thr Leu Thr
1190 1195 1200
Lys Ala Pro Ala Asp Leu Arg Gly Val Ala His Asn Asn Leu Met
1205 1210 1215
Ala Met Ala Gln Glu Thr Gly Asp Asn Leu Tyr Trp Gly Ser Val
1220 1225 1230
Thr Gly Ser Gln Ser Asn Ala Val Ser Pro Thr Pro Ala Pro Arg
1235 1240 1245
Asn Pro Ser Asp Pro Met Pro Gln Ala Pro Ala Leu Trp Ile Glu
1250 1255 1260
Thr Thr Ala Tyr Ala Leu Leu His Leu Leu Leu His Glu Gly Lys
1265 1270 1275
Ala Glu Met Ala Asp Gln Ala Ala Ala Trp Leu Thr Arg Gln Gly
1280 1285 1290
Ser Phe Gln Gly Gly Phe Arg Ser Thr Gln Asp Thr Val Ile Ala
1295 1300 1305
Leu Asp Ala Leu Ser Ala Tyr Trp Ile Ala Ser His Thr Thr Glu
1310 1315 1320
Glu Arg Gly Leu Asn Val Thr Leu Ser Ser Thr Gly Arg Asn Gly
1325 1330 1335
Phe Lys Ser His Ala Leu Gln Leu Asn Asn Arg Gln Ile Arg Gly
1340 1345 1350
Leu Glu Glu Glu Leu Gln Phe Ser Leu Gly Ser Lys Ile Asn Val
1355 1360 1365
Lys Val Gly Gly Asn Ser Lys Gly Thr Leu Lys Val Leu Arg Thr
1370 1375 1380
Tyr Asn Val Leu Asp Met Lys Asn Thr Thr Cys Gln Asp Leu Gln
1385 1390 1395
Ile Glu Val Thr Val Lys Gly His Val Glu Tyr Thr Met Glu Ala
1400 1405 1410
Asn Glu Asp Tyr Glu Asp Tyr Glu Tyr Asp Glu Leu Pro Ala Lys
1415 1420 1425
Asp Asp Pro Asp Ala Pro Leu Gln Pro Val Thr Pro Leu Gln Leu
1430 1435 1440
Phe Glu Gly Arg Arg Asn Arg Arg Arg Arg Glu Ala Pro Lys Val
1445 1450 1455
Val Glu Glu Gln Glu Ser Arg Val His Tyr Thr Val Cys Ile Trp
1460 1465 1470
Arg Asn Gly Lys Val Gly Leu Ser Gly Met Ala Ile Ala Asp Val

1475 1480 1485
Thr Leu Leu Ser Gly Phe His Ala Leu Arg Ala Asp Leu Glu Lys
1490 1495 1500
Leu Thr Ser Leu Ser Asp Arg Tyr Val Ser His Phe Glu Thr Glu
1505 1510 1515
Gly Pro His Val Leu Leu Tyr Phe Asp Ser Val Pro Thr Ser Arg
1520 1525 1530
Glu Cys Val Gly Phe Glu Ala Val Gln Glu Val Pro Val Gly Leu
1535 1540 1545
Val Gln Pro Ala Ser Ala Thr Leu Tyr Asp Tyr Tyr Asn Pro Glu
1550 1555 1560
Arg Arg Cys Ser Val Phe Tyr Gly Ala Pro Ser Lys Ser Arg Leu
1565 1570 1575
Leu Ala Thr Leu Cys Ser Ala Glu Val Cys Gln Cys Ala Glu Gly
1580 1585 1590
Lys Cys Pro Arg Gln Arg Arg Ala Leu Glu Arg Gly Leu Gln Asp
1595 1600 1605
Glu Asp Gly Tyr Arg Met Lys Phe Ala Cys Tyr Tyr Pro Arg Val
1610 1615 1620
Glu Tyr Gly Phe Gln Val Lys Val Leu Arg Glu Asp Ser Arg Ala
1625 1630 1635
Ala Phe Arg Leu Phe Glu Thr Lys Ile Thr Gln Val Leu His Phe
1640 1645 1650
Thr Lys Asp Val Lys Ala Ala Ala Asn Gln Met Arg Asn Phe Leu
1655 1660 1665
Val Arg Ala Ser Cys Arg Leu Arg Leu Glu Pro Gly Lys Glu Tyr
1670 1675 1680
Leu Ile Met Gly Leu Asp Gly Ala Thr Tyr Asp Leu Glu Gly His
1685 1690 1695
Pro Gln Tyr Leu Leu Asp Ser Asn Ser Trp Ile Glu Glu Met Pro
1700 1705 1710
Ser Glu Arg Leu Cys Arg Ser Thr Arg Gln Arg Ala Ala Cys Ala
1715 1720 1725
Gln Leu Asn Asp Phe Leu Gln Glu Tyr Gly Thr Gln Gly Cys Gln
1730 1735 1740
Val

<210> 233
<211> 295
<212> PRT
<213> Homo sapiens
<400> 233
Met Ile Glu Val Leu Thr Thr Thr Asp Ser Gln Lys Leu Leu His Gln
1 5 10 15
Leu Asn Ala Leu Leu Glu Gln Glu Ser Arg Cys Gln Pro Lys Val Cys
20 25 30
Gly Leu Arg Leu Ile Glu Ser Ala His Asp Asn Gly Leu Arg Met Thr
35 40 45
Ala Arg Leu Arg Asp Phe Glu Val Lys Asp Leu Leu Ser Leu Thr Gln
50 55 60
Phe Phe Gly Phe Asp Thr Glu Thr Phe Ser Leu Ala Val Asn Leu Leu
65 70 75 80
Asp Arg Phe Leu Ser Lys Met Lys Val Gln Pro Lys His Leu Gly Cys
85 90 95
Val Gly Leu Ser Cys Phe Tyr Leu Ala Val Lys Ser Ile Glu Glu Glu
100 105 110
Arg Asn Val Pro Leu Ala Thr Asp Leu Ile Arg Ile Ser Gln Tyr Arg
115 120 125
Phe Thr Val Ser Asp Leu Met Arg Met Glu Lys Ile Val Leu Glu Lys
130 135 140
Val Cys Trp Lys Val Lys Ala Thr Thr Ala Phe Gln Phe Leu Gln Leu
145 150 155 160
Tyr Tyr Ser Leu Leu Gln Glu Asn Leu Pro Leu Glu Arg Arg Asn Ser
165 170 175
Ile Asn Phe Glu Arg Leu Glu Ala Gln Leu Lys Ala Cys His Cys Arg
180 185 190
Ile Ile Phe Ser Lys Ala Lys Pro Ser Val Leu Ala Leu Ser Ile Ile
195 200 205

```
Ala Leu Glu Ile Gln Ala Gln Lys Cys Val Glu Leu Thr Glu Gly Ile
    210                 215                 220
Glu Cys Leu Gln Lys His Ser Lys Ile Asn Gly Arg Asp Leu Thr Phe
225                 230                 235                 240
Trp Gln Glu Leu Val Ser Lys Cys Leu Thr Glu Tyr Ser Ser Asn Lys
                245                 250                 255
Cys Ser Lys Pro Asn Val Gln Lys Leu Lys Trp Ile Val Ser Gly Arg
            260                 265                 270
Thr Ala Arg Gln Leu Lys His Ser Tyr Tyr Arg Ile Thr His Leu Pro
        275                 280                 285
Thr Ile Pro Glu Met Val Pro
    290                 295
```

<210> 234
<211> 359
<212> PRT
<213> Homo sapiens
<400> 234

```
Met Ala Ala Val Ser Gly Leu Val Arg Arg Pro Leu Arg Glu Val Ser
1               5                   10                  15
Gly Leu Leu Lys Arg Arg Phe His Trp Thr Ala Pro Ala Ala Leu Gln
            20                  25                  30
Val Thr Val Arg Asp Ala Ile Asn Gln Gly Met Asp Glu Glu Leu Glu
        35                  40                  45
Arg Asp Glu Lys Val Phe Leu Leu Gly Glu Glu Val Ala Gln Tyr Asp
    50                  55                  60
Gly Ala Tyr Lys Val Ser Arg Gly Leu Trp Lys Lys Tyr Gly Asp Lys
65                  70                  75                  80
Arg Ile Ile Asp Thr Pro Ile Ser Glu Met Gly Phe Ala Gly Ile Ala
                85                  90                  95
Val Gly Ala Ala Met Ala Gly Leu Arg Pro Ile Cys Glu Phe Met Thr
            100                 105                 110
Phe Asn Phe Ser Met Gln Ala Ile Asp Gln Val Ile Asn Ser Ala Ala
        115                 120                 125
Lys Thr Tyr Tyr Met Ser Gly Gly Leu Gln Pro Val Pro Ile Val Phe
    130                 135                 140
Arg Gly Pro Asn Gly Ala Ser Ala Gly Val Ala Ala Gln His Ser Gln
145                 150                 155                 160
Cys Phe Ala Ala Trp Tyr Gly His Cys Pro Gly Leu Lys Val Val Ser
                165                 170                 175
Pro Trp Asn Ser Glu Asp Ala Lys Gly Leu Ile Lys Ser Ala Ile Arg
            180                 185                 190
Asp Asn Asn Pro Val Val Val Leu Glu Asn Glu Leu Met Tyr Gly Val
        195                 200                 205
Pro Phe Glu Phe Leu Pro Glu Ala Gln Ser Lys Asp Phe Leu Ile Pro
    210                 215                 220
Ile Gly Lys Ala Lys Ile Glu Arg Gln Gly Thr His Ile Thr Val Val
225                 230                 235                 240
Ser His Ser Arg Pro Val Gly His Cys Leu Glu Ala Ala Ala Val Leu
                245                 250                 255
Ser Lys Glu Gly Val Glu Cys Glu Val Ile Asn Met Arg Thr Ile Arg
            260                 265                 270
Pro Met Asp Met Glu Thr Ile Glu Ala Ser Val Met Lys Thr Asn His
        275                 280                 285
Leu Val Thr Val Glu Gly Gly Trp Pro Gln Phe Gly Val Gly Ala Glu
    290                 295                 300
Ile Cys Ala Arg Ile Met Glu Gly Pro Ala Phe Asn Phe Leu Asp Ala
305                 310                 315                 320
Pro Ala Val Arg Val Thr Gly Ala Asp Val Pro Met Pro Tyr Ala Lys
                325                 330                 335
Ile Leu Glu Asp Asn Ser Ile Pro Gln Val Lys Asp Ile Ile Phe Ala
            340                 345                 350
Ile Lys Lys Thr Leu Asn Ile
        355
```

<210> 235
<211> 420
<212> PRT
<213> Homo sapiens

<400> 235
Met Glu Val Pro Pro Arg Leu Ser His Val Pro Pro Pro Leu Phe Pro
1 5 10 15
Ser Ala Pro Ala Thr Leu Ala Ser Arg Ser Leu Ser His Trp Arg Pro
20 25 30
Arg Pro Pro Arg Gln Leu Ala Pro Leu Leu Pro Ser Leu Ala Pro Ser
35 40 45
Ser Ala Arg Gln Gly Ala Arg Arg Ala Gln Arg His Val Thr Ala Gln
50 55 60
Gln Pro Ser Arg Leu Ala Gly Gly Ala Ala Ile Lys Gly Gly Arg Arg
65 70 75 80
Arg Arg Pro Asp Leu Phe Arg Arg His Phe Lys Ser Ser Ser Ile Gln
85 90 95
Arg Ser Ala Ala Ala Ala Ala Ala Thr Arg Thr Ala Arg Gln His Pro
100 105 110
Pro Ala Asp Ser Ser Val Thr Met Glu Asp Met Asn Glu Tyr Ser Asn
115 120 125
Ile Glu Glu Phe Ala Glu Gly Ser Lys Ile Asn Ala Ser Lys Asn Gln
130 135 140
Gln Asp Asp Gly Lys Met Phe Ile Gly Gly Leu Ser Trp Asp Thr Ser
145 150 155 160
Lys Lys Asp Leu Thr Glu Tyr Leu Ser Arg Phe Gly Glu Val Val Asp
165 170 175
Cys Thr Ile Lys Thr Asp Pro Val Thr Gly Arg Ser Arg Gly Phe Gly
180 185 190
Phe Val Leu Phe Lys Asp Ala Ala Ser Val Asp Lys Val Leu Glu Leu
195 200 205
Lys Glu His Lys Leu Asp Gly Lys Leu Ile Asp Pro Lys Arg Ala Lys
210 215 220
Ala Leu Lys Gly Lys Glu Pro Pro Lys Lys Val Phe Val Gly Gly Leu
225 230 235 240
Ser Pro Asp Thr Ser Glu Glu Gln Ile Lys Glu Tyr Phe Gly Ala Phe
245 250 255
Gly Glu Ile Glu Asn Ile Glu Leu Pro Met Asp Thr Lys Thr Asn Glu
260 265 270
Arg Arg Gly Phe Cys Phe Ile Thr Tyr Thr Asp Glu Glu Pro Val Lys
275 280 285
Lys Leu Leu Glu Ser Arg Tyr His Gln Ile Gly Ser Gly Lys Cys Glu
290 295 300
Ile Lys Val Ala Gln Pro Lys Glu Val Tyr Arg Gln Gln Gln Gln Gln
305 310 315 320
Gln Lys Gly Gly Arg Gly Ala Ala Ala Gly Gly Arg Gly Gly Thr Arg
325 330 335
Gly Arg Gly Arg Gly Gln Gly Gln Asn Trp Asn Gln Gly Phe Asn Asn
340 345 350
Tyr Tyr Asp Gln Gly Tyr Gly Asn Tyr Asn Ser Ala Tyr Gly Gly Asp
355 360 365
Gln Asn Tyr Ser Gly Tyr Gly Gly Tyr Asp Tyr Thr Gly Tyr Asn Tyr
370 375 380
Gly Asn Tyr Gly Tyr Gly Gln Gly Tyr Ala Asp Tyr Ser Gly Gln Gln
385 390 395 400
Ser Thr Tyr Gly Lys Ala Ser Arg Gly Gly Gly Asn His Gln Asn Asn
405 410 415
Tyr Gln Pro Tyr
420

<210> 236
<211> 211
<212> PRT
<213> Homo sapiens
<400> 236
Met Asp Asp Ala His Glu Ser Pro Ser Asp Lys Gly Gly Glu Thr Gly
1 5 10 15
Glu Ser Asp Glu Thr Ala Ala Val Pro Gly Asp Pro Gly Ala Thr Asp
20 25 30
Thr Asp Gly Ile Pro Glu Glu Thr Asp Gly Asp Ala Asp Val Asp Leu
35 40 45
Lys Glu Ala Ala Ala Glu Glu Gly Glu Leu Glu Ser Gln Asp Val Ser
50 55 60

Asp Leu Thr Thr Val Glu Arg Glu Asp Ser Ser Leu Leu Asn Pro Ala
65 70 75 80
Ala Lys Lys Leu Lys Ile Asp Thr Lys Glu Lys Lys Glu Lys Lys Gln
85 90 95
Lys Val Asp Glu Asp Glu Ile Gln Lys Met Gln Ile Leu Val Ser Ser
100 105 110
Phe Ser Glu Glu Gln Leu Asn Arg Tyr Glu Met Tyr Arg Arg Ser Ala
115 120 125
Phe Pro Lys Ala Ala Ile Lys Arg Leu Ile Gln Ser Ile Thr Gly Thr
130 135 140
Ser Val Ser Gln Asn Val Val Ile Ala Met Ser Gly Ile Ser Lys Val
145 150 155 160
Phe Val Gly Glu Val Val Glu Glu Ala Leu Asp Val Cys Glu Lys Trp
165 170 175
Gly Glu Met Pro Pro Leu Gln Pro Lys His Met Arg Glu Ala Val Arg
180 185 190
Arg Leu Lys Ser Lys Gly Gln Ile Pro Asn Ser Lys His Lys Lys Ile
195 200 205
Ile Phe Phe
210

<210> 237
<211> 382
<212> PRT
<213> Homo sapiens
<220>
<221> misc_feature
<222> (19)..(19)
<223> X = A, C, D, E, F, G, H, I, K, L, M, N, P, Q, R, S, T, V, W, or Y
<400> 237
Met Ala Leu Gln Gly Ile Ser Val Val Glu Leu Ser Gly Leu Ala Pro
1 5 10 15
Gly Arg Xaa Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
20 25 30
Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
35 40 45
Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Glu Pro Arg
50 55 60
Ala Ala Ala Ser Val Gln Ala Val Gly Cys Ala Ala Gly Ala Leu Pro
65 70 75 80
Pro Arg Cys His Gly Glu Thr Pro Ala Gly Pro Arg Asp Ser Ala Ala
85 90 95
Gly Lys Ser Lys Ala Tyr Leu Cys Gln Ala Glu Trp Ile Trp Pro Val
100 105 110
Gln Glu Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
115 120 125
Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
130 135 140
Ala Pro Leu Asn Leu Val Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
145 150 155 160
Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys
165 170 175
Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
180 185 190
Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
195 200 205
Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
210 215 220
Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
225 230 235 240
Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
245 250 255
Asn Gln Met Ser Thr Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
260 265 270
Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
275 280 285
Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val
290 295 300
His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu

```
305                 310                 315                 320
Gln Asp Val Ser Pro Arg Leu Ala Pro Leu Leu Leu Asn Thr Pro Ala
                325                 330                 335
Ile Pro Ser Ser Lys Gly Asp Pro Phe Ile Gly Glu His Thr Glu Glu
            340                 345                 350
Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn
        355                 360                 365
Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu
    370                 375                 380
```

<210> 238
<211> 254
<212> PRT
<213> Homo sapiens
<400> 238

```
Met Asp Asn Tyr Ala Asp Leu Ser Asp Thr Glu Leu Thr Thr Leu Leu
1               5                   10                  15
Arg Arg Tyr Asn Ile Pro His Gly Pro Val Val Gly Ser Thr Arg Arg
            20                  25                  30
Leu Tyr Glu Lys Lys Ile Phe Glu Tyr Glu Thr Gln Arg Arg Arg Leu
        35                  40                  45
Ser Pro Pro Ser Ser Ser Ala Ala Ser Ser Tyr Ser Phe Ser Asp Leu
    50                  55                  60
Asn Ser Thr Arg Gly Asp Ala Asp Met Tyr Asp Leu Pro Lys Lys Glu
65                  70                  75                  80
Asp Ala Leu Leu Tyr Gln Ser Lys Gly Tyr Asn Asp Asp Tyr Tyr Glu
                85                  90                  95
Glu Ser Tyr Phe Thr Thr Arg Thr Tyr Gly Glu Pro Glu Ser Ala Gly
            100                 105                 110
Pro Ser Arg Ala Val Arg Gln Ser Val Thr Ser Phe Pro Asp Ala Asp
        115                 120                 125
Ala Phe His His Gln Val His Asp Asp Asp Leu Leu Ser Ser Ser Glu
    130                 135                 140
Glu Glu Cys Lys Asp Arg Glu Arg Pro Met Tyr Gly Arg Asp Ser Ala
145                 150                 155                 160
Tyr Gln Ser Ile Thr His Tyr Arg Pro Val Ser Ala Ser Arg Ser Ser
                165                 170                 175
Leu Asp Leu Ser Tyr Tyr Pro Thr Ser Ser Ser Thr Ser Phe Met Ser
            180                 185                 190
Ser Ser Ser Ser Ser Ser Ser Trp Leu Thr Arg Arg Ala Ile Arg Pro
        195                 200                 205
Glu Asn Arg Ala Pro Gly Ala Gly Leu Gly Gln Asp Arg Gln Val Pro
    210                 215                 220
Leu Trp Gly Gln Leu Leu Leu Phe Leu Val Phe Val Ile Val Leu Phe
225                 230                 235                 240
Phe Ile Tyr His Phe Met Gln Ala Glu Glu Gly Asn Pro Phe
                245                 250
```

<210> 239
<211> 423
<212> PRT
<213> Homo sapiens
<400> 239

```
Met Ala Met Val Val Ser Ser Trp Arg Asp Pro Gln Asp Asp Val Ala
1               5                   10                  15
Gly Gly Asn Pro Gly Gly Pro Asn Pro Ala Ala Gln Ala Ala Arg Gly
            20                  25                  30
Gly Gly Gly Gly Ala Gly Glu Gln Gln Gln Gln Ala Gly Ser Gly Ala
        35                  40                  45
Pro His Thr Pro Gln Thr Pro Gly Gln Pro Gly Ala Pro Ala Thr Pro
    50                  55                  60
Gly Thr Ala Gly Asp Lys Gly Gln Gly Pro Pro Gly Ser Gly Gln Ser
65                  70                  75                  80
Gln Gln His Ile Glu Cys Val Val Cys Gly Asp Lys Ser Ser Gly Lys
                85                  90                  95
His Tyr Gly Gln Phe Thr Cys Glu Gly Cys Lys Ser Phe Phe Lys Arg
            100                 105                 110
Ser Val Arg Arg Asn Leu Thr Tyr Thr Cys Arg Ala Asn Arg Asn Cys
        115                 120                 125
```

```
Pro Ile Asp Gln His His Arg Asn Gln Cys Gln Tyr Cys Arg Leu Lys
    130                 135                 140
Lys Cys Leu Lys Val Gly Met Arg Arg Glu Ala Val Gln Arg Gly Arg
145                 150                 155                 160
Met Pro Pro Thr Gln Pro Asn Pro Gly Gln Tyr Ala Leu Thr Asn Gly
                165                 170                 175
Asp Pro Leu Asn Gly His Cys Tyr Leu Ser Gly Tyr Ile Ser Leu Leu
            180                 185                 190
Leu Arg Ala Glu Pro Tyr Pro Thr Ser Arg Tyr Gly Ser Gln Cys Met
        195                 200                 205
Gln Pro Asn Asn Ile Met Gly Ile Glu Asn Ile Cys Glu Leu Ala Ala
    210                 215                 220
Arg Leu Leu Phe Ser Ala Val Glu Trp Ala Arg Asn Ile Pro Phe Phe
225                 230                 235                 240
Pro Asp Leu Gln Ile Thr Asp Gln Val Ser Leu Leu Arg Leu Thr Trp
                245                 250                 255
Ser Glu Leu Phe Val Leu Asn Ala Ala Gln Cys Ser Met Pro Leu His
            260                 265                 270
Val Ala Pro Leu Leu Ala Ala Ala Gly Leu His Ala Ser Pro Met Ser
        275                 280                 285
Ala Asp Arg Val Val Ala Phe Met Asp His Ile Arg Ile Phe Gln Glu
    290                 295                 300
Gln Val Glu Lys Leu Lys Ala Leu His Val Asp Ser Ala Glu Tyr Ser
305                 310                 315                 320
Cys Leu Lys Ala Ile Val Leu Phe Thr Ser Asp Ala Cys Gly Leu Ser
                325                 330                 335
Asp Ala Ala His Ile Glu Ser Leu Gln Glu Lys Ser Gln Cys Ala Leu
            340                 345                 350
Glu Glu Tyr Val Arg Ser Gln Tyr Pro Asn Gln Pro Ser Arg Phe Gly
        355                 360                 365
Lys Leu Leu Leu Arg Leu Pro Ser Leu Arg Thr Val Ser Ser Ser Val
    370                 375                 380
Ile Glu Gln Leu Phe Phe Val Arg Leu Val Gly Lys Thr Pro Ile Glu
385                 390                 395                 400
Thr Leu Ile Arg Asp Met Leu Leu Ser Gly Ser Ser Phe Asn Trp Pro
                405                 410                 415
Tyr Met Ser Ile Gln Cys Ser
            420
```

<210> 240
<211> 536
<212> PRT
<213> Homo sapiens
<400> 240

```
Met Lys Gln Ser Ser Asn Val Pro Ala Phe Leu Ser Lys Leu Trp Thr
1               5                   10                  15
Leu Val Glu Glu Thr His Thr Asn Glu Phe Ile Thr Trp Ser Gln Asn
            20                  25                  30
Gly Gln Ser Phe Leu Val Leu Asp Glu Gln Arg Phe Ala Lys Glu Ile
        35                  40                  45
Leu Pro Lys Tyr Phe Lys His Asn Asn Met Ala Ser Phe Val Arg Gln
    50                  55                  60
Leu Asn Met Tyr Gly Phe Arg Lys Val Val His Ile Asp Ser Gly Ile
65                  70                  75                  80
Val Lys Gln Glu Arg Asp Gly Pro Val Glu Phe Gln His Pro Tyr Phe
                85                  90                  95
Lys Gln Gly Gln Asp Asp Leu Leu Glu Asn Ile Lys Arg Lys Val Ser
            100                 105                 110
Ser Ser Lys Pro Glu Glu Asn Lys Ile Arg Gln Glu Asp Leu Thr Lys
        115                 120                 125
Ile Ile Ser Ser Ala Gln Lys Val Gln Ile Lys Gln Glu Thr Ile Glu
    130                 135                 140
Ser Arg Leu Ser Glu Leu Lys Ser Glu Asn Glu Ser Leu Trp Lys Glu
145                 150                 155                 160
Val Ser Glu Leu Arg Ala Lys His Ala Gln Gln Gln Gln Val Ile Arg
                165                 170                 175
Lys Ile Val Gln Phe Ile Val Thr Leu Val Gln Asn Asn Gln Leu Val
            180                 185                 190
Ser Leu Lys Arg Lys Arg Pro Leu Leu Leu Asn Thr Asn Gly Ala Gln
```

```
        195                 200                 205
Lys Lys Asn Leu Phe Gln His Ile Val Lys Glu Pro Thr Asp Asn His
    210                 215                 220
His His Lys Val Pro His Ser Arg Thr Glu Gly Leu Lys Pro Arg Glu
225                 230                 235                 240
Arg Ile Ser Asp Asp Ile Ile Ile Tyr Asp Val Thr Asp Asp Asn Ala
                245                 250                 255
Asp Glu Glu Asn Ile Pro Val Ile Pro Glu Thr Asn Glu Asp Val Ile
            260                 265                 270
Ser Asp Pro Ser Asn Cys Ser Gln Tyr Pro Asp Ile Val Ile Val Glu
        275                 280                 285
Asp Asp Asn Glu Asp Glu Tyr Ala Pro Val Ile Gln Ser Gly Glu Gln
    290                 295                 300
Asn Glu Pro Ala Arg Glu Ser Leu Ser Ser Gly Ser Asp Gly Ser Ser
305                 310                 315                 320
Pro Leu Met Ser Ser Ala Val Gln Leu Asn Gly Ser Ser Ser Leu Thr
                325                 330                 335
Ser Glu Asp Pro Val Thr Met Met Asp Ser Ile Leu Asn Asp Asn Ile
            340                 345                 350
Asn Leu Leu Gly Lys Val Glu Leu Leu Asp Tyr Leu Asp Ser Ile Asp
        355                 360                 365
Cys Ser Leu Glu Asp Phe Gln Ala Met Leu Ser Gly Arg Gln Phe Ser
    370                 375                 380
Ile Asp Pro Asp Leu Leu Val Asp Leu Phe Thr Ser Ser Val Gln Met
385                 390                 395                 400
Asn Pro Thr Asp Tyr Ile Asn Asn Thr Lys Ser Glu Asn Lys Gly Leu
                405                 410                 415
Glu Thr Thr Lys Asn Asn Val Val Gln Pro Val Ser Glu Glu Gly Arg
            420                 425                 430
Lys Ser Lys Ser Lys Pro Asp Lys Gln Leu Ile Gln Tyr Thr Ala Phe
        435                 440                 445
Pro Leu Leu Ala Phe Leu Asp Gly Asn Pro Ala Ser Ser Val Glu Gln
    450                 455                 460
Ala Ser Thr Thr Ala Ser Ser Glu Val Leu Ser Ser Val Asp Lys Pro
465                 470                 475                 480
Ile Glu Val Asp Glu Leu Leu Asp Ser Ser Leu Asp Pro Glu Pro Thr
                485                 490                 495
Gln Ser Lys Leu Val Arg Leu Glu Pro Leu Thr Glu Ala Glu Ala Ser
            500                 505                 510
Glu Ala Thr Leu Phe Tyr Leu Cys Glu Leu Ala Pro Ala Pro Leu Asp
        515                 520                 525
Ser Asp Met Pro Leu Leu Asp Ser
    530                 535
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<210> 241
<211> 616
<212> PRT
<213> Homo sapiens
<400> 241

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Met Asn Ser Pro Gly Gly Arg Gly Lys Lys Lys Gly Ser Gly Gly Ala
1               5                   10                  15
Ser Asn Pro Val Pro Pro Arg Pro Pro Pro Pro Cys Leu Ala Pro Ala
            20                  25                  30
Pro Pro Ala Ala Gly Pro Ala Pro Pro Pro Glu Ser Pro His Lys Arg
        35                  40                  45
Asn Leu Tyr Tyr Phe Ser Tyr Pro Leu Phe Val Gly Phe Ala Leu Leu
    50                  55                  60
Arg Leu Val Ala Phe His Leu Gly Leu Leu Phe Val Trp Leu Cys Gln
65                  70                  75                  80
Arg Phe Ser Arg Ala Leu Met Ala Ala Lys Arg Ser Ser Gly Ala Ala
                85                  90                  95
Pro Ala Pro Ala Ser Ala Ser Ala Pro Ala Pro Val Pro Gly Gly Glu
            100                 105                 110
Ala Glu Arg Val Arg Val Phe His Lys Gln Ala Phe Glu Tyr Ile Ser
        115                 120                 125
Ile Ala Leu Arg Ile Asp Glu Asp Glu Lys Ala Gly Gln Lys Glu Gln
    130                 135                 140
Ala Val Glu Trp Tyr Lys Lys Gly Ile Glu Glu Leu Glu Lys Gly Ile
145                 150                 155                 160
```

```
Ala Val Ile Val Thr Gly Gln Gly Glu Gln Cys Glu Arg Ala Arg Arg
                165                 170                 175
Leu Gln Ala Lys Met Met Thr Asn Leu Val Met Ala Lys Asp Arg Leu
            180                 185                 190
Gln Leu Leu Glu Lys Met Gln Pro Val Leu Pro Phe Ser Lys Ser Gln
        195                 200                 205
Thr Asp Val Tyr Asn Asp Ser Thr Asn Leu Ala Cys Arg Asn Gly His
    210                 215                 220
Leu Gln Ser Glu Ser Gly Ala Val Pro Lys Arg Lys Asp Pro Leu Thr
225                 230                 235                 240
His Thr Ser Asn Ser Leu Pro Arg Ser Lys Thr Val Met Lys Thr Gly
                245                 250                 255
Ser Ala Gly Leu Ser Gly His His Arg Ala Pro Ser Tyr Ser Gly Leu
            260                 265                 270
Ser Met Val Ser Gly Val Lys Gln Gly Ser Gly Pro Ala Pro Thr Thr
        275                 280                 285
His Lys Gly Thr Pro Lys Thr Asn Arg Thr Asn Lys Pro Ser Thr Pro
    290                 295                 300
Thr Thr Ala Thr Arg Lys Lys Lys Asp Leu Lys Asn Phe Arg Asn Val
305                 310                 315                 320
Asp Ser Asn Leu Ala Asn Leu Ile Met Asn Glu Ile Val Asp Asn Gly
                325                 330                 335
Thr Ala Val Lys Phe Asp Asp Ile Ala Gly Gln Asp Leu Ala Lys Gln
            340                 345                 350
Ala Leu Gln Glu Ile Val Ile Leu Pro Ser Leu Arg Pro Glu Leu Phe
        355                 360                 365
Thr Gly Leu Arg Ala Pro Ala Arg Gly Leu Leu Leu Phe Gly Pro Pro
    370                 375                 380
Gly Asn Gly Lys Thr Met Leu Ala Lys Ala Val Ala Ala Glu Ser Asn
385                 390                 395                 400
Ala Thr Phe Phe Asn Ile Ser Ala Ala Ser Leu Thr Ser Lys Tyr Val
                405                 410                 415
Gly Glu Gly Glu Lys Leu Val Arg Ala Leu Phe Ala Val Ala Arg Glu
            420                 425                 430
Leu Gln Pro Ser Ile Ile Phe Ile Asp Glu Val Asp Ser Leu Leu Cys
        435                 440                 445
Glu Arg Arg Glu Gly Glu His Asp Ala Ser Arg Arg Leu Lys Thr Glu
    450                 455                 460
Phe Leu Ile Glu Phe Asp Gly Val Gln Ser Ala Gly Asp Asp Arg Val
465                 470                 475                 480
Leu Val Met Gly Ala Thr Asn Arg Pro Gln Glu Leu Asp Glu Ala Val
                485                 490                 495
Leu Arg Arg Phe Ile Lys Arg Val Tyr Val Ser Leu Pro Asn Glu Glu
            500                 505                 510
Thr Arg Leu Leu Leu Leu Lys Asn Leu Leu Cys Lys Gln Gly Ser Pro
        515                 520                 525
Leu Thr Gln Lys Glu Leu Ala Gln Leu Ala Arg Met Thr Asp Gly Tyr
    530                 535                 540
Ser Gly Ser Asp Leu Thr Ala Leu Ala Lys Asp Ala Ala Leu Gly Pro
545                 550                 555                 560
Ile Arg Glu Leu Lys Pro Glu Gln Val Lys Asn Met Ser Ala Ser Glu
                565                 570                 575
Met Arg Asn Ile Arg Leu Ser Asp Phe Thr Glu Ser Leu Lys Lys Ile
            580                 585                 590
Lys Arg Ser Val Ser Pro Gln Thr Leu Glu Ala Tyr Ile Arg Trp Asn
        595                 600                 605
Lys Asp Phe Gly Asp Thr Thr Val
    610                 615

<210>  242
<211>  1979
<212>  PRT
<213>  Homo sapiens
<400>  242
Met Ser Ser Trp Leu Gly Gly Leu Gly Ser Gly Leu Gly Gln Ser Leu
1               5                   10                  15
Gly Gln Val Gly Gly Ser Leu Ala Ser Leu Thr Gly Gln Ile Ser Asn
            20                  25                  30
Phe Thr Lys Asp Met Leu Met Glu Gly Thr Glu Glu Val Glu Ala Glu
```

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        35                  40                  45
Leu Pro Asp Ser Arg Thr Lys Glu Ile Glu Ala Ile His Ala Ile Leu
    50                  55                  60
Arg Ser Glu Asn Glu Arg Leu Lys Lys Leu Cys Thr Asp Leu Glu Glu
65                  70                  75                  80
Lys His Glu Ala Ser Glu Ile Gln Ile Lys Gln Gln Ser Thr Ser Tyr
                85                  90                  95
Arg Asn Gln Leu Gln Gln Lys Glu Val Glu Ile Ser His Leu Lys Ala
            100                 105                 110
Arg Gln Ile Ala Leu Gln Asp Gln Leu Leu Lys Leu Gln Ser Ala Ala
        115                 120                 125
Gln Ser Val Pro Ser Gly Ala Gly Val Pro Ala Thr Thr Ala Ser Ser
    130                 135                 140
Ser Phe Ala Tyr Gly Ile Ser His His Pro Ser Ala Phe His Asp Asp
145                 150                 155                 160
Asp Met Asp Phe Gly Asp Ile Ile Ser Ser Gln Gln Glu Ile Asn Arg
                165                 170                 175
Leu Ser Asn Glu Val Ser Arg Leu Glu Ser Glu Val Gly His Trp Arg
            180                 185                 190
His Ile Ala Gln Thr Ser Lys Ala Gln Gly Thr Asp Asn Ser Asp Gln
        195                 200                 205
Ser Glu Ile Cys Lys Leu Gln Asn Ile Ile Lys Glu Leu Lys Gln Asn
    210                 215                 220
Arg Ser Gln Glu Ile Asp Asp His Gln His Glu Met Ser Val Leu Gln
225                 230                 235                 240
Asn Ala His Gln Gln Lys Leu Thr Glu Ile Ser Arg Arg His Arg Glu
                245                 250                 255
Glu Leu Ser Asp Tyr Glu Glu Arg Ile Glu Glu Leu Glu Asn Leu Leu
            260                 265                 270
Gln Gln Gly Gly Ser Gly Val Ile Glu Thr Asp Leu Ser Lys Ile Tyr
        275                 280                 285
Glu Met Gln Lys Thr Ile Gln Val Leu Gln Ile Glu Lys Val Glu Ser
    290                 295                 300
Thr Lys Lys Met Glu Gln Leu Glu Asp Lys Ile Lys Asp Ile Asn Lys
305                 310                 315                 320
Lys Leu Ser Ser Ala Glu Asn Asp Arg Asp Ile Leu Arg Arg Glu Gln
                325                 330                 335
Glu Gln Leu Asn Val Glu Lys Arg Gln Ile Met Glu Glu Cys Glu Asn
            340                 345                 350
Leu Lys Leu Glu Cys Ser Lys Leu Gln Pro Ser Ala Val Lys Gln Ser
        355                 360                 365
Asp Thr Met Thr Glu Lys Glu Arg Ile Leu Ala Gln Ser Ala Ser Val
    370                 375                 380
Glu Glu Val Phe Arg Leu Gln Gln Ala Leu Ser Asp Ala Glu Asn Glu
385                 390                 395                 400
Ile Met Arg Leu Ser Ser Leu Asn Gln Asp Asn Ser Leu Ala Glu Asp
                405                 410                 415
Asn Leu Lys Leu Lys Met Arg Ile Glu Val Leu Glu Lys Glu Lys Ser
            420                 425                 430
Leu Leu Ser Gln Glu Lys Glu Glu Leu Gln Met Ser Leu Leu Lys Leu
        435                 440                 445
Asn Asn Glu Tyr Glu Val Ile Lys Ser Thr Ala Thr Arg Asp Ile Ser
    450                 455                 460
Leu Asp Ser Glu Leu His Asp Leu Arg Leu Asn Leu Glu Ala Lys Glu
465                 470                 475                 480
Gln Glu Leu Asn Gln Ser Ile Ser Glu Lys Glu Thr Leu Ile Ala Glu
                485                 490                 495
Ile Glu Glu Leu Asp Arg Gln Asn Gln Glu Ala Thr Lys His Met Ile
            500                 505                 510
Leu Ile Lys Asp Gln Leu Ser Lys Gln Gln Asn Glu Gly Asp Ser Ile
        515                 520                 525
Ile Ser Lys Leu Lys Gln Asp Leu Asn Asp Glu Lys Lys Arg Val His
    530                 535                 540
Gln Leu Glu Asp Asp Lys Met Asp Ile Thr Lys Glu Leu Asp Val Gln
545                 550                 555                 560
Lys Glu Lys Leu Ile Gln Ser Glu Val Ala Leu Asn Asp Leu His Leu
                565                 570                 575
Thr Lys Gln Lys Leu Glu Asp Lys Val Glu Asn Leu Val Asp Gln Leu
            580                 585                 590
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Asn Lys Ser Gln Glu Ser Asn Val Ser Ile Gln Lys Glu Asn Leu Glu
595 600 605
Leu Lys Glu His Ile Arg Gln Asn Glu Glu Glu Leu Ser Arg Ile Arg
610 615 620
Asn Glu Leu Met Gln Ser Leu Asn Gln Asp Ser Asn Ser Asn Phe Lys
625 630 635 640
Asp Thr Leu Leu Lys Glu Arg Glu Ala Glu Val Arg Asn Leu Lys Gln
645 650 655
Asn Leu Ser Glu Leu Glu Gln Leu Asn Glu Asn Leu Lys Lys Val Ala
660 665 670
Phe Asp Val Lys Met Glu Asn Glu Lys Leu Val Leu Ala Cys Glu Asp
675 680 685
Val Arg His Gln Leu Glu Glu Cys Leu Ala Gly Asn Asn Gln Leu Ser
690 695 700
Leu Glu Lys Asn Thr Ile Val Glu Thr Leu Lys Met Glu Lys Gly Glu
705 710 715 720
Ile Glu Ala Glu Leu Cys Trp Ala Lys Lys Arg Leu Leu Glu Glu Ala
725 730 735
Asn Lys Tyr Glu Lys Thr Ile Glu Glu Leu Ser Asn Ala Arg Asn Leu
740 745 750
Asn Thr Ser Ala Leu Gln Leu Glu His Glu His Leu Ile Lys Leu Asn
755 760 765
Gln Lys Lys Asp Met Glu Ile Ala Glu Leu Lys Lys Asn Ile Glu Gln
770 775 780
Met Asp Thr Asp His Lys Glu Thr Lys Asp Val Leu Ser Ser Ser Leu
785 790 795 800
Glu Glu Gln Lys Gln Leu Thr Gln Leu Ile Asn Lys Lys Glu Ile Phe
805 810 815
Ile Glu Lys Leu Lys Glu Arg Ser Ser Lys Leu Gln Glu Glu Leu Asp
820 825 830
Lys Tyr Ser Gln Ala Leu Arg Lys Asn Glu Ile Leu Arg Gln Thr Ile
835 840 845
Glu Glu Lys Asp Arg Ser Leu Gly Ser Met Lys Glu Glu Asn Asn His
850 855 860
Leu Gln Glu Glu Leu Glu Arg Leu Arg Glu Glu Gln Ser Arg Thr Ala
865 870 875 880
Pro Val Ala Asp Pro Lys Thr Leu Asp Ser Val Thr Glu Leu Ala Ser
885 890 895
Glu Val Ser Gln Leu Asn Thr Ile Lys Glu His Leu Glu Glu Glu Ile
900 905 910
Lys His His Gln Lys Ile Ile Glu Asp Gln Asn Gln Ser Lys Met Gln
915 920 925
Leu Leu Gln Ser Leu Gln Glu Gln Lys Lys Glu Met Asp Glu Phe Arg
930 935 940
Tyr Gln His Glu Gln Met Asn Ala Thr His Thr Gln Leu Phe Leu Glu
945 950 955 960
Lys Asp Glu Glu Ile Lys Ser Leu Gln Lys Thr Ile Glu Gln Ile Lys
965 970 975
Thr Gln Leu His Glu Glu Arg Gln Asp Ile Gln Thr Asp Asn Ser Asp
980 985 990
Ile Phe Gln Glu Thr Lys Val Gln Ser Leu Asn Ile Glu Asn Gly Ser
995 1000 1005
Glu Lys His Asp Leu Ser Lys Ala Glu Thr Glu Arg Leu Val Lys
1010 1015 1020
Gly Ile Lys Glu Arg Glu Leu Glu Ile Lys Leu Leu Asn Glu Lys
1025 1030 1035
Asn Ile Ser Leu Thr Lys Gln Ile Asp Gln Leu Ser Lys Asp Glu
1040 1045 1050
Val Gly Lys Leu Thr Gln Ile Ile Gln Gln Lys Asp Leu Glu Ile
1055 1060 1065
Gln Ala Leu His Ala Arg Ile Ser Ser Thr Ser His Thr Gln Asp
1070 1075 1080
Val Val Tyr Leu Gln Gln Gln Leu Gln Ala Tyr Ala Met Glu Arg
1085 1090 1095
Glu Lys Val Phe Ala Val Leu Asn Glu Lys Thr Arg Glu Asn Ser
1100 1105 1110
His Leu Lys Thr Glu Tyr His Lys Met Met Asp Ile Val Ala Ala
1115 1120 1125
Lys Glu Ala Ala Leu Ile Lys Leu Gln Asp Glu Asn Lys Lys Leu

1130 1135 1140
Ser Thr Arg Phe Glu Ser Ser Gly Gln Asp Met Phe Arg Glu Thr
1145 1150 1155
Ile Gln Asn Leu Ser Arg Ile Ile Arg Glu Lys Asp Ile Glu Ile
1160 1165 1170
Asp Ala Leu Ser Gln Lys Cys Gln Thr Leu Leu Ala Val Leu Gln
1175 1180 1185
Thr Ser Ser Thr Gly Asn Glu Ala Gly Gly Val Asn Ser His Gln
1190 1195 1200
Phe Glu Glu Leu Leu Gln Glu Arg Asp Lys Leu Lys Gln Gln Val
1205 1210 1215
Lys Lys Met Glu Glu Trp Lys Gln Gln Val Met Thr Thr Val Gln
1220 1225 1230
Asn Met Gln His Glu Ser Ala Gln Leu Gln Glu Glu Leu His Gln
1235 1240 1245
Leu Gln Ala Gln Val Leu Val Asp Ser Asp Asn Asn Ser Lys Leu
1250 1255 1260
Gln Val Asp Tyr Thr Gly Leu Ile Gln Ser Tyr Glu Gln Asn Glu
1265 1270 1275
Thr Lys Leu Lys Asn Phe Gly Gln Glu Leu Ala Gln Val Gln His
1280 1285 1290
Ser Ile Gly Gln Leu Cys Asn Thr Lys Asp Leu Leu Leu Gly Lys
1295 1300 1305
Leu Asp Ile Ile Ser Pro Gln Leu Ser Ser Ala Ser Leu Leu Thr
1310 1315 1320
Pro Gln Ser Ala Glu Cys Leu Arg Ala Ser Lys Ser Glu Val Leu
1325 1330 1335
Ser Glu Ser Ser Glu Leu Leu Gln Gln Glu Leu Glu Glu Leu Arg
1340 1345 1350
Lys Ser Leu Gln Glu Lys Asp Ala Thr Ile Arg Thr Leu Gln Glu
1355 1360 1365
Asn Asn His Arg Leu Ser Asp Ser Ile Ala Ala Thr Ser Glu Leu
1370 1375 1380
Glu Arg Lys Glu His Glu Gln Thr Asp Ser Glu Ile Lys Gln Leu
1385 1390 1395
Lys Glu Lys Gln Asp Val Leu Gln Lys Leu Leu Lys Glu Lys Asp
1400 1405 1410
Leu Leu Ile Lys Ala Lys Ser Asp Gln Leu Leu Ser Ser Asn Glu
1415 1420 1425
Asn Phe Thr Asn Lys Val Asn Glu Asn Glu Leu Leu Arg Gln Ala
1430 1435 1440
Val Thr Asn Leu Lys Glu Arg Ile Leu Ile Leu Glu Met Asp Ile
1445 1450 1455
Gly Lys Leu Lys Gly Glu Asn Glu Lys Ile Val Glu Thr Tyr Arg
1460 1465 1470
Gly Lys Glu Thr Glu Tyr Gln Ala Leu Gln Glu Thr Asn Met Lys
1475 1480 1485
Phe Ser Met Met Leu Arg Glu Lys Glu Phe Glu Cys His Ser Met
1490 1495 1500
Lys Glu Lys Ala Leu Ala Phe Glu Gln Leu Leu Lys Glu Lys Glu
1505 1510 1515
Gln Gly Lys Thr Gly Glu Leu Asn Gln Leu Leu Asn Ala Val Lys
1520 1525 1530
Ser Met Gln Glu Lys Thr Val Val Phe Gln Gln Glu Arg Asp Gln
1535 1540 1545
Val Met Leu Ala Leu Lys Gln Lys Gln Met Glu Asn Thr Ala Leu
1550 1555 1560
Gln Asn Glu Val Gln Arg Leu Arg Asp Lys Glu Phe Arg Ser Asn
1565 1570 1575
Gln Glu Leu Glu Arg Leu Arg Asn His Leu Leu Glu Ser Glu Asp
1580 1585 1590
Ser Tyr Thr Arg Glu Ala Leu Ala Ala Glu Asp Arg Glu Ala Lys
1595 1600 1605
Leu Arg Lys Lys Val Thr Val Leu Glu Glu Lys Leu Val Ser Ser
1610 1615 1620
Ser Asn Ala Met Glu Asn Ala Ser His Gln Ala Ser Val Gln Val
1625 1630 1635
Glu Ser Leu Gln Glu Gln Leu Asn Val Val Ser Lys Gln Arg Asp
1640 1645 1650

Glu Thr Ala Leu Gln Leu Ser Val Ser Gln Glu Gln Val Lys Gln
1655 1660 1665
Tyr Ala Leu Ser Leu Ala Asn Leu Gln Met Val Leu Glu His Phe
1670 1675 1680
Gln Gln Glu Glu Lys Ala Met Tyr Ser Ala Glu Leu Glu Lys Gln
1685 1690 1695
Lys Gln Leu Ile Ala Glu Trp Lys Lys Asn Ala Glu Asn Leu Glu
1700 1705 1710
Gly Lys Val Ile Ser Leu Gln Glu Cys Leu Asp Glu Ala Asn Ala
1715 1720 1725
Ala Leu Asp Ser Ala Ser Arg Leu Thr Glu Gln Leu Asp Val Lys
1730 1735 1740
Glu Glu Gln Ile Glu Glu Leu Lys Arg Gln Asn Glu Leu Arg Gln
1745 1750 1755
Glu Met Leu Asp Asp Val Gln Lys Lys Leu Met Ser Leu Ala Asn
1760 1765 1770
Ser Ser Glu Gly Lys Val Asp Lys Val Leu Met Arg Asn Leu Phe
1775 1780 1785
Ile Gly His Phe His Thr Pro Lys Asn Gln Arg His Glu Val Leu
1790 1795 1800
Arg Leu Met Gly Ser Ile Leu Gly Val Arg Arg Glu Glu Met Glu
1805 1810 1815
Gln Leu Phe His Asp Asp Gln Gly Ser Val Thr Arg Trp Met Thr
1820 1825 1830
Gly Trp Leu Gly Gly Gly Ser Lys Ser Val Pro Asn Thr Pro Leu
1835 1840 1845
Arg Pro Asn Gln Gln Ser Val Val Asn Ser Ser Phe Ser Glu Leu
1850 1855 1860
Phe Val Lys Phe Leu Glu Thr Glu Ser His Pro Ser Ile Pro Pro
1865 1870 1875
Pro Lys Leu Ser Val His Asp Met Lys Pro Leu Asp Ser Pro Gly
1880 1885 1890
Arg Arg Lys Arg Asp Thr Asn Ala Pro Glu Ser Phe Lys Asp Thr
1895 1900 1905
Ala Glu Ser Arg Ser Gly Arg Arg Thr Asp Val Asn Pro Phe Leu
1910 1915 1920
Ala Pro Arg Ser Ala Ala Val Pro Leu Ile Asn Pro Ala Gly Leu
1925 1930 1935
Gly Pro Gly Gly Pro Gly His Leu Leu Leu Lys Pro Ile Ser Asp
1940 1945 1950
Val Leu Pro Thr Phe Thr Pro Leu Pro Ala Leu Pro Asp Asn Ser
1955 1960 1965
Ala Gly Val Val Leu Lys Asp Leu Leu Lys Gln
1970 1975

<210> 243
<211> 522
<212> PRT
<213> Homo sapiens
<400> 243
Met Ser Ser Arg Pro Leu Glu Ser Pro Pro Pro Tyr Arg Pro Asp Glu
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Phe Lys Pro Asn His Tyr Ala Pro Ser Asn Asp Ile Tyr Gly Gly Glu
20 25 30
Met His Val Arg Pro Met Leu Ser Gln Pro Ala Tyr Ser Phe Tyr Pro
35 40 45
Glu Asp Glu Ile Leu His Phe Tyr Lys Trp Thr Ser Pro Pro Gly Val
50 55 60
Ile Arg Ile Leu Ser Met Leu Ile Ile Val Met Cys Ile Ala Ile Phe
65 70 75 80
Ala Cys Val Ala Ser Thr Leu Ala Trp Asp Arg Gly Tyr Gly Thr Ser
85 90 95
Leu Leu Gly Gly Ser Val Gly Tyr Pro Tyr Gly Gly Ser Gly Phe Gly
100 105 110
Ser Tyr Gly Ser Gly Tyr Gly Tyr Gly Tyr Gly Tyr Gly Tyr Gly Tyr
115 120 125
Gly Gly Tyr Thr Asp Pro Arg Ala Ala Lys Gly Phe Met Leu Ala Met
130 135 140
Ala Ala Phe Cys Phe Ile Ala Ala Leu Val Ile Phe Val Thr Ser Val

145 150 155 160
Ile Arg Ser Glu Met Ser Arg Thr Arg Arg Tyr Tyr Leu Ser Val Ile
165 170 175
Ile Val Ser Ala Ile Leu Gly Ile Met Val Phe Ile Ala Thr Ile Val
180 185 190
Tyr Ile Met Gly Val Asn Pro Thr Ala Gln Ser Ser Gly Ser Leu Tyr
195 200 205
Gly Ser Gln Ile Tyr Ala Leu Cys Asn Gln Phe Tyr Thr Pro Ala Ala
210 215 220
Thr Gly Leu Tyr Val Asp Gln Tyr Leu Tyr His Tyr Cys Val Val Asp
225 230 235 240
Pro Gln Glu Ala Ile Ala Ile Val Leu Gly Phe Met Ile Ile Val Ala
245 250 255
Phe Ala Leu Ile Ile Phe Phe Ala Val Lys Thr Arg Arg Lys Met Asp
260 265 270
Arg Tyr Asp Lys Ser Asn Ile Leu Trp Asp Lys Glu His Ile Tyr Asp
275 280 285
Glu Gln Pro Pro Asn Val Glu Glu Trp Val Lys Asn Val Ser Ala Gly
290 295 300
Thr Gln Asp Val Pro Ser Pro Pro Ser Asp Tyr Val Glu Arg Val Asp
305 310 315 320
Ser Pro Met Ala Tyr Ser Ser Asn Gly Lys Val Asn Asp Lys Arg Phe
325 330 335
Tyr Pro Glu Ser Ser Tyr Lys Ser Thr Pro Val Pro Glu Val Val Gln
340 345 350
Glu Leu Pro Leu Thr Ser Pro Val Asp Asp Phe Arg Gln Pro Arg Tyr
355 360 365
Ser Ser Gly Gly Asn Phe Glu Thr Pro Ser Lys Arg Ala Pro Ala Lys
370 375 380
Gly Arg Ala Gly Arg Ser Lys Arg Thr Glu Gln Asp His Tyr Glu Thr
385 390 395 400
Asp Tyr Thr Thr Gly Gly Glu Ser Cys Asp Glu Leu Glu Glu Asp Trp
405 410 415
Ile Arg Glu Tyr Pro Pro Ile Thr Ser Asp Gln Gln Arg Gln Leu Tyr
420 425 430
Lys Arg Asn Phe Asp Thr Gly Leu Gln Glu Tyr Lys Ser Leu Gln Ser
435 440 445
Glu Leu Asp Glu Ile Asn Lys Glu Leu Ser Arg Leu Asp Lys Glu Leu
450 455 460
Asp Asp Tyr Arg Glu Glu Ser Glu Glu Tyr Met Ala Ala Ala Asp Glu
465 470 475 480
Tyr Asn Arg Leu Lys Gln Val Lys Gly Ser Ala Asp Tyr Lys Ser Lys
485 490 495
Lys Asn His Cys Lys Gln Leu Lys Ser Lys Leu Ser His Ile Lys Lys
500 505 510
Met Val Gly Asp Tyr Asp Arg Gln Lys Thr
515 520

<210> 244
<211> 2181
<212> PRT
<213> Homo sapiens
<400> 244
Met Met Met Met Met Met Met Lys Lys Met Gln His Gln Arg Gln Gln
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Gln Ala Asp His Ala Asn Glu Ala Asn Tyr Ala Arg Gly Thr Arg Leu
20 25 30
Pro Leu Ser Gly Glu Gly Pro Thr Ser Gln Pro Asn Ser Ser Lys Gln
35 40 45
Thr Val Leu Ser Trp Gln Ala Ala Ile Asp Ala Ala Arg Gln Ala Lys
50 55 60
Ala Ala Gln Thr Met Ser Thr Ser Ala Pro Pro Val Gly Ser Leu
65 70 75 80
Ser Gln Arg Lys Arg Gln Gln Tyr Ala Lys Ser Lys Lys Gln Gly Asn
85 90 95
Ser Ser Asn Ser Arg Pro Ala Arg Ala Leu Phe Cys Leu Ser Leu Asn
100 105 110
Asn Pro Ile Arg Arg Ala Cys Ile Ser Ile Val Glu Trp Lys Pro Phe
115 120 125

Asp Ile Phe Ile Leu Leu Ala Ile Phe Ala Asn Cys Val Ala Leu Ala
130 135 140
Ile Tyr Ile Pro Phe Pro Glu Asp Asp Ser Asn Ser Thr Asn His Asn
145 150 155 160
Leu Glu Lys Val Glu Tyr Ala Phe Leu Ile Ile Phe Thr Val Glu Thr
165 170 175
Phe Leu Lys Ile Ile Ala Tyr Gly Leu Leu Leu His Pro Asn Ala Tyr
180 185 190
Val Arg Asn Gly Trp Asn Leu Leu Asp Phe Val Ile Val Ile Val Gly
195 200 205
Leu Phe Ser Val Ile Leu Glu Gln Leu Thr Lys Glu Thr Glu Gly Gly
210 215 220
Asn His Ser Ser Gly Lys Ser Gly Gly Phe Asp Val Lys Ala Leu Arg
225 230 235 240
Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val Ser Gly Val Pro Ser
245 250 255
Leu Gln Val Val Leu Asn Ser Ile Ile Lys Ala Met Val Pro Leu Leu
260 265 270
His Ile Ala Leu Leu Val Leu Phe Val Ile Ile Ile Tyr Ala Ile Ile
275 280 285
Gly Leu Glu Leu Phe Ile Gly Lys Met His Lys Thr Cys Phe Phe Ala
290 295 300
Asp Ser Asp Ile Val Ala Glu Glu Asp Pro Ala Pro Cys Ala Phe Ser
305 310 315 320
Gly Asn Gly Arg Gln Cys Thr Ala Asn Gly Thr Glu Cys Arg Ser Gly
325 330 335
Trp Val Gly Pro Asn Gly Gly Ile Thr Asn Phe Asp Asn Phe Ala Phe
340 345 350
Ala Met Leu Thr Val Phe Gln Cys Ile Thr Met Glu Gly Trp Thr Asp
355 360 365
Val Leu Tyr Trp Val Asn Asp Ala Ile Gly Trp Glu Trp Pro Trp Val
370 375 380
Tyr Phe Val Ser Leu Ile Ile Leu Gly Ser Phe Phe Val Leu Asn Leu
385 390 395 400
Val Leu Gly Val Leu Ser Gly Glu Phe Ser Lys Glu Arg Glu Lys Ala
405 410 415
Lys Ala Arg Gly Asp Phe Gln Lys Leu Arg Glu Lys Gln Gln Leu Glu
420 425 430
Glu Asp Leu Lys Gly Tyr Leu Asp Trp Ile Thr Gln Ala Glu Asp Ile
435 440 445
Asp Pro Glu Asn Glu Glu Glu Gly Gly Glu Glu Gly Lys Arg Asn Thr
450 455 460
Ser Met Pro Thr Ser Glu Thr Glu Ser Val Asn Thr Glu Asn Val Ser
465 470 475 480
Gly Glu Gly Glu Asn Arg Gly Cys Cys Gly Ser Leu Trp Cys Trp Trp
485 490 495
Arg Arg Arg Gly Ala Ala Lys Ala Gly Pro Ser Gly Cys Arg Arg Trp
500 505 510
Gly Gln Ala Ile Ser Lys Ser Lys Leu Ser Arg Arg Trp Arg Arg Trp
515 520 525
Asn Arg Phe Asn Arg Arg Arg Cys Arg Ala Ala Val Lys Ser Val Thr
530 535 540
Phe Tyr Trp Leu Val Ile Val Leu Val Phe Leu Asn Thr Leu Thr Ile
545 550 555 560
Ser Ser Glu His Tyr Asn Gln Pro Asp Trp Leu Thr Gln Ile Gln Asp
565 570 575
Ile Ala Asn Lys Val Leu Leu Ala Leu Phe Thr Cys Glu Met Leu Val
580 585 590
Lys Met Tyr Ser Leu Gly Leu Gln Ala Tyr Phe Val Ser Leu Phe Asn
595 600 605
Arg Phe Asp Cys Phe Val Val Cys Gly Gly Ile Thr Glu Thr Ile Leu
610 615 620
Val Glu Leu Glu Ile Met Ser Pro Leu Gly Ile Ser Val Phe Arg Cys
625 630 635 640
Val Arg Leu Leu Arg Ile Phe Lys Val Thr Arg His Trp Thr Ser Leu
645 650 655
Ser Asn Leu Val Ala Ser Leu Leu Asn Ser Met Lys Ser Ile Ala Ser
660 665 670
Leu Leu Leu Leu Leu Phe Leu Phe Ile Ile Ile Phe Ser Leu Leu Gly

675 680 685
Met Gln Leu Phe Gly Gly Lys Phe Asn Phe Asp Glu Thr Gln Thr Lys
690 695 700
Arg Ser Thr Phe Asp Asn Phe Pro Gln Ala Leu Leu Thr Val Phe Gln
705 710 715 720
Ile Leu Thr Gly Glu Asp Trp Asn Ala Val Met Tyr Asp Gly Ile Met
725 730 735
Ala Tyr Gly Gly Pro Ser Ser Ser Gly Met Ile Val Cys Ile Tyr Phe
740 745 750
Ile Ile Leu Phe Ile Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe Leu
755 760 765
Ala Ile Ala Val Asp Asn Leu Ala Asp Ala Glu Ser Leu Asn Thr Ala
770 775 780
Gln Lys Glu Glu Ala Glu Glu Lys Glu Arg Lys Lys Ile Ala Arg Lys
785 790 795 800
Glu Ser Leu Glu Asn Lys Lys Asn Asn Lys Pro Glu Val Asn Gln Ile
805 810 815
Ala Asn Ser Asp Asn Lys Val Thr Ile Asp Asp Tyr Arg Glu Glu Asp
820 825 830
Glu Asp Lys Asp Pro Tyr Pro Pro Cys Asp Val Pro Val Gly Glu Glu
835 840 845
Glu Glu Glu Glu Glu Glu Asp Glu Pro Glu Val Pro Ala Gly Pro Arg
850 855 860
Pro Arg Arg Ile Ser Glu Leu Asn Met Lys Glu Lys Ile Ala Pro Ile
865 870 875 880
Pro Glu Gly Ser Ala Phe Phe Ile Leu Ser Lys Thr Asn Pro Ile Arg
885 890 895
Val Gly Cys His Lys Leu Ile Asn His His Ile Phe Thr Asn Leu Ile
900 905 910
Leu Val Phe Ile Met Leu Ser Ser Ala Ala Leu Ala Ala Glu Asp Pro
915 920 925
Ile Arg Ser His Ser Phe Arg Asn Thr Ile Leu Gly Tyr Phe Asp Tyr
930 935 940
Ala Phe Thr Ala Ile Phe Thr Val Glu Ile Leu Leu Lys Met Thr Thr
945 950 955 960
Phe Gly Ala Phe Leu His Lys Gly Ala Phe Cys Arg Asn Tyr Phe Asn
965 970 975
Leu Leu Asp Met Leu Val Val Gly Val Ser Leu Val Ser Phe Gly Ile
980 985 990
Gln Ser Ser Ala Ile Ser Val Val Lys Ile Leu Arg Val Leu Arg Val
995 1000 1005
Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys Gly Leu Lys His
1010 1015 1020
Val Val Gln Cys Val Phe Val Ala Ile Arg Thr Ile Gly Asn Ile
1025 1030 1035
Met Ile Val Thr Thr Leu Leu Gln Phe Met Phe Ala Cys Ile Gly
1040 1045 1050
Val Gln Leu Phe Lys Gly Lys Phe Tyr Arg Cys Thr Asp Glu Ala
1055 1060 1065
Lys Ser Asn Pro Glu Glu Cys Arg Gly Leu Phe Ile Leu Tyr Lys
1070 1075 1080
Asp Gly Asp Val Asp Ser Pro Val Val Arg Glu Arg Ile Trp Gln
1085 1090 1095
Asn Ser Asp Phe Asn Phe Asp Asn Val Leu Ser Ala Met Met Ala
1100 1105 1110
Leu Phe Thr Val Ser Thr Phe Glu Gly Trp Pro Ala Leu Leu Tyr
1115 1120 1125
Lys Ala Ile Asp Ser Asn Gly Glu Asn Ile Gly Pro Ile Tyr Asn
1130 1135 1140
His Arg Val Glu Ile Ser Ile Phe Phe Ile Ile Tyr Ile Ile Ile
1145 1150 1155
Val Ala Phe Phe Met Met Asn Ile Phe Val Gly Phe Val Ile Val
1160 1165 1170
Thr Phe Gln Glu Gln Gly Glu Lys Glu Tyr Lys Asn Cys Glu Leu
1175 1180 1185
Asp Lys Asn Gln Arg Gln Cys Val Glu Tyr Ala Leu Lys Ala Arg
1190 1195 1200
Pro Leu Arg Arg Tyr Ile Pro Lys Asn Pro Tyr Gln Tyr Lys Phe
1205 1210 1215

Trp Tyr Val Val Asn Ser Ser Pro Phe Glu Tyr Met Met Phe Val
1220 1225 1230
Leu Ile Met Leu Asn Thr Leu Cys Leu Ala Met Gln His Tyr Glu
1235 1240 1245
Gln Ser Lys Met Phe Asn Asp Ala Met Asp Ile Leu Asn Met Val
1250 1255 1260
Phe Thr Gly Val Phe Thr Val Glu Met Val Leu Lys Val Ile Ala
1265 1270 1275
Phe Lys Pro Lys Gly Tyr Phe Ser Asp Ala Trp Asn Thr Phe Asp
1280 1285 1290
Ser Leu Ile Val Ile Gly Ser Ile Ile Asp Val Ala Leu Ser Glu
1295 1300 1305
Ala Asp Pro Thr Glu Ser Glu Asn Val Pro Val Pro Thr Ala Thr
1310 1315 1320
Pro Gly Asn Ser Glu Glu Ser Asn Arg Ile Ser Ile Thr Phe Phe
1325 1330 1335
Arg Leu Phe Arg Val Met Arg Leu Val Lys Leu Leu Ser Arg Gly
1340 1345 1350
Glu Gly Ile Arg Thr Leu Leu Trp Thr Phe Ile Lys Ser Phe Gln
1355 1360 1365
Ala Leu Pro Tyr Val Ala Leu Leu Ile Ala Met Leu Phe Phe Ile
1370 1375 1380
Tyr Ala Val Ile Gly Met Gln Met Phe Gly Lys Val Ala Met Arg
1385 1390 1395
Asp Asn Asn Gln Ile Asn Arg Asn Asn Asn Phe Gln Thr Phe Pro
1400 1405 1410
Gln Ala Val Leu Leu Leu Phe Arg Cys Ala Thr Gly Glu Ala Trp
1415 1420 1425
Gln Glu Ile Met Leu Ala Cys Leu Pro Gly Lys Leu Cys Asp Pro
1430 1435 1440
Glu Ser Asp Tyr Asn Pro Gly Glu Glu Tyr Thr Cys Gly Ser Asn
1445 1450 1455
Phe Ala Ile Val Tyr Phe Ile Ser Phe Tyr Met Leu Cys Ala Phe
1460 1465 1470
Leu Ile Ile Asn Leu Phe Val Ala Val Ile Met Asp Asn Phe Asp
1475 1480 1485
Tyr Leu Thr Arg Asp Trp Ser Ile Leu Gly Pro His His Leu Asp
1490 1495 1500
Glu Phe Lys Arg Ile Trp Ser Glu Tyr Asp Pro Glu Ala Lys Gly
1505 1510 1515
Arg Ile Lys His Leu Asp Val Val Thr Leu Leu Arg Arg Ile Gln
1520 1525 1530
Pro Pro Leu Gly Phe Gly Lys Leu Cys Pro His Arg Val Ala Cys
1535 1540 1545
Lys Arg Leu Val Ala Met Asn Met Pro Leu Asn Ser Asp Gly Thr
1550 1555 1560
Val Met Phe Asn Ala Thr Leu Phe Ala Leu Val Arg Thr Ala Leu
1565 1570 1575
Lys Ile Lys Thr Glu Gly Asn Leu Glu Gln Ala Asn Glu Glu Leu
1580 1585 1590
Arg Ala Val Ile Lys Lys Ile Trp Lys Lys Thr Ser Met Lys Leu
1595 1600 1605
Leu Asp Gln Val Val Pro Pro Ala Gly Asp Asp Glu Val Thr Val
1610 1615 1620
Gly Lys Phe Tyr Ala Thr Phe Leu Ile Gln Asp Tyr Phe Arg Lys
1625 1630 1635
Phe Lys Lys Arg Lys Glu Gln Gly Leu Val Gly Lys Tyr Pro Ala
1640 1645 1650
Lys Asn Thr Thr Ile Ala Leu Gln Ala Gly Leu Arg Thr Leu His
1655 1660 1665
Asp Ile Gly Pro Glu Ile Arg Arg Ala Ile Ser Cys Asp Leu Gln
1670 1675 1680
Asp Asp Glu Pro Glu Glu Thr Lys Arg Glu Glu Glu Asp Asp Val
1685 1690 1695
Phe Lys Arg Asn Gly Ala Leu Leu Gly Asn His Val Asn His Val
1700 1705 1710
Asn Ser Asp Arg Arg Asp Ser Leu Gln Gln Thr Asn Thr Thr His
1715 1720 1725
Arg Pro Leu His Val Gln Arg Pro Ser Ile Pro Pro Ala Ser Asp

1730 1735 1740
Thr Glu Lys Pro Leu Phe Pro Pro Ala Gly Asn Ser Val Cys His
1745 1750 1755
Asn His His Asn His Asn Ser Ile Gly Lys Gln Val Pro Thr Ser
1760 1765 1770
Thr Asn Ala Asn Leu Asn Asn Ala Asn Met Ser Lys Ala Ala His
1775 1780 1785
Gly Lys Arg Pro Ser Ile Gly Asn Leu Glu His Val Ser Glu Asn
1790 1795 1800
Gly His His Ser Ser His Lys His Asp Arg Glu Pro Gln Arg Arg
1805 1810 1815
Ser Ser Val Lys Arg Thr Arg Tyr Tyr Glu Thr Tyr Ile Arg Ser
1820 1825 1830
Asp Ser Gly Asp Glu Gln Leu Pro Thr Ile Cys Arg Glu Asp Pro
1835 1840 1845
Glu Ile His Gly Tyr Phe Arg Asp Pro His Cys Leu Gly Glu Gln
1850 1855 1860
Glu Tyr Phe Ser Ser Glu Glu Cys Tyr Glu Asp Asp Ser Ser Pro
1865 1870 1875
Thr Trp Ser Arg Gln Asn Tyr Gly Tyr Tyr Ser Arg Tyr Pro Gly
1880 1885 1890
Arg Asn Ile Asp Ser Glu Arg Pro Arg Gly Tyr His His Pro Gln
1895 1900 1905
Gly Phe Leu Glu Asp Asp Asp Ser Pro Val Cys Tyr Asp Ser Arg
1910 1915 1920
Arg Ser Pro Arg Arg Arg Leu Leu Pro Pro Thr Pro Ala Ser His
1925 1930 1935
Arg Arg Ser Ser Phe Asn Phe Glu Cys Leu Arg Arg Gln Ser Ser
1940 1945 1950
Gln Glu Glu Val Pro Ser Ser Pro Ile Phe Pro His Arg Thr Ala
1955 1960 1965
Leu Pro Leu His Leu Met Gln Gln Gln Ile Met Ala Val Ala Gly
1970 1975 1980
Leu Asp Ser Ser Lys Ala Gln Lys Tyr Ser Pro Ser His Ser Thr
1985 1990 1995
Arg Ser Trp Ala Thr Pro Pro Ala Thr Pro Pro Tyr Arg Asp Trp
2000 2005 2010
Thr Pro Cys Tyr Thr Pro Leu Ile Gln Val Glu Gln Ser Glu Ala
2015 2020 2025
Leu Asp Gln Val Asn Gly Ser Leu Pro Ser Leu His Arg Ser Ser
2030 2035 2040
Trp Tyr Thr Asp Glu Pro Asp Ile Ser Tyr Arg Thr Phe Thr Pro
2045 2050 2055
Ala Ser Leu Thr Val Pro Ser Ser Phe Arg Asn Lys Asn Ser Asp
2060 2065 2070
Lys Gln Arg Ser Ala Asp Ser Leu Val Glu Ala Val Leu Ile Ser
2075 2080 2085
Glu Gly Leu Gly Arg Tyr Ala Arg Asp Pro Lys Phe Val Ser Ala
2090 2095 2100
Thr Lys His Glu Ile Ala Asp Ala Cys Asp Leu Thr Ile Asp Glu
2105 2110 2115
Met Glu Ser Ala Ala Ser Thr Leu Leu Asn Gly Asn Val Arg Pro
2120 2125 2130
Arg Ala Asn Gly Asp Val Gly Pro Leu Ser His Arg Gln Asp Tyr
2135 2140 2145
Glu Leu Gln Asp Phe Gly Pro Gly Tyr Ser Asp Glu Glu Pro Asp
2150 2155 2160
Pro Gly Arg Asp Glu Glu Asp Leu Ala Asp Glu Met Ile Cys Ile
2165 2170 2175
Thr Thr Leu
2180

<210> 245
<211> 377
<212> PRT
<213> Homo sapiens
<400> 245
Met Glu Leu Ser Val Leu Leu Phe Leu Ala Leu Leu Thr Gly Leu Leu
1 5 10 15

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Leu Leu Leu Val Gln Arg His Pro Asn Ser His Gly Thr Leu Pro Pro
            20                  25                  30
Gly Pro Arg Pro Leu Pro Leu Leu Gly Asn Leu Leu Gln Met Asp Arg
        35                  40                  45
Arg Gly Leu Leu Lys Ser Phe Leu Arg Phe Arg Glu Lys Tyr Gly Asp
    50                  55                  60
Val Phe Thr Val His Leu Gly Pro Arg Pro Val Val Met Leu Cys Gly
65                  70                  75                  80
Val Glu Ala Ile Arg Glu Ala Leu Val Asp Asn Ala Glu Ala Phe Ser
                85                  90                  95
Gly Arg Gly Lys Ile Val Ile Met Asp Pro Val Tyr Gln Gly Tyr Gly
            100                 105                 110
Met Leu Phe Ala Asn Gly Asn Arg Trp Lys Val Leu Arg Arg Phe Ser
        115                 120                 125
Val Thr Thr Met Arg Asp Phe Gly Met Gly Lys Arg Ser Val Glu Glu
    130                 135                 140
Arg Ile Gln Asp Glu Ala Gln Cys Leu Ile Glu Glu Leu Arg Lys Ser
145                 150                 155                 160
Lys Gly Ala Leu Val Asp Pro Thr Phe Leu Phe His Ser Ile Thr Ala
                165                 170                 175
Asn Ile Ile Cys Ser Ile Ile Phe Gly Lys Arg Phe His Tyr Gln Asp
            180                 185                 190
Gln Glu Phe Leu Lys Thr Leu Asn Leu Phe Cys Gln Ser Phe Leu Leu
        195                 200                 205
Ile Ser Ser Ile Ser Ser Gln Leu Phe Glu Leu Phe Ser Gly Phe Leu
    210                 215                 220
Lys Tyr Phe Pro Gly Ala His Arg Gln Val Tyr Lys Asn Leu Gln Glu
225                 230                 235                 240
Ile Asn Ala Tyr Ile Gly His Ser Val Glu Lys His Arg Glu Thr Leu
                245                 250                 255
Asp Pro Ser Ala Pro Arg Asp Leu Ile Asp Thr Tyr Leu Leu His Met
            260                 265                 270
Glu Lys Glu Lys Ser Asn Pro His Ser Glu Phe Ser His Gln Asn Leu
        275                 280                 285
Ile Ile Asn Thr Leu Ser Leu Phe Phe Ala Gly Thr Glu Thr Thr Ser
    290                 295                 300
Thr Thr Leu Arg Tyr Gly Phe Leu Leu Met Leu Lys Tyr Pro His Val
305                 310                 315                 320
Ala Glu Arg Val Tyr Lys Glu Ile Glu Gln Val Val Gly Pro His Arg
                325                 330                 335
Pro Pro Ala Leu Asp Asp Arg Ala Lys Met Pro Tyr Thr Glu Ala Val
            340                 345                 350
Ile Arg Glu Ile Gln Arg Phe Ala Asp Leu Leu Pro Met Gly Val Pro
        355                 360                 365
His Ile Val Thr Gln His Thr Ser Phe
    370                 375

<210>  246
<211>  280
<212>  PRT
<213>  Homo sapiens
<400>  246
Met Ala Glu Lys Phe Asp Cys His Tyr Cys Arg Asp Pro Leu Gln Gly
1               5                   10                  15
Lys Lys Tyr Val Gln Lys Asp Gly His His Cys Cys Leu Lys Cys Phe
            20                  25                  30
Asp Lys Phe Cys Ala Asn Thr Cys Val Glu Cys Arg Lys Pro Ile Gly
        35                  40                  45
Ala Asp Ser Lys Glu Val His Tyr Lys Asn Arg Phe Trp His Asp Thr
    50                  55                  60
Cys Phe Arg Cys Ala Lys Cys Leu His Pro Leu Ala Asn Glu Thr Phe
65                  70                  75                  80
Val Ala Lys Asp Asn Lys Ile Leu Cys Asn Lys Cys Thr Thr Arg Glu
                85                  90                  95
Asp Ser Pro Lys Cys Lys Gly Cys Phe Lys Ala Ile Val Ala Gly Asp
            100                 105                 110
Gln Asn Val Glu Tyr Lys Gly Thr Val Trp His Lys Asp Cys Phe Thr
        115                 120                 125
Cys Ser Asn Cys Lys Gln Val Ile Gly Thr Gly Ser Phe Phe Pro Lys
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    130                 135                 140
Gly Glu Asp Phe Tyr Cys Val Thr Cys His Glu Thr Lys Phe Ala Lys
145                 150                 155                 160
His Cys Val Lys Cys Asn Lys Ala Ile Thr Ser Gly Gly Ile Thr Tyr
                165                 170                 175
Gln Asp Gln Pro Trp His Ala Asp Cys Phe Val Cys Val Thr Cys Ser
            180                 185                 190
Lys Lys Leu Ala Gly Gln Arg Phe Thr Ala Val Glu Asp Gln Tyr Tyr
        195                 200                 205
Cys Val Asp Cys Tyr Lys Asn Phe Val Ala Lys Lys Cys Ala Gly Cys
    210                 215                 220
Lys Asn Pro Ile Thr Gly Phe Gly Lys Gly Ser Ser Val Val Ala Tyr
225                 230                 235                 240
Glu Gly Gln Ser Trp His Asp Tyr Cys Phe His Cys Lys Lys Cys Ser
                245                 250                 255
Val Asn Leu Ala Asn Lys Arg Phe Val Phe His Gln Glu Gln Val Tyr
            260                 265                 270
Cys Pro Asp Cys Ala Lys Lys Leu
        275                 280
```

<210> 247
<211> 267
<212> PRT
<213> Homo sapiens
<400> 247

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Met Ala Ser Pro Ser Lys Gly Asn Asp Leu Phe Ser Pro Asp Glu Glu
1               5                   10                  15
Gly Pro Ala Val Val Ala Gly Pro Gly Pro Gly Pro Gly Gly Ala Glu
            20                  25                  30
Gly Ala Ala Glu Glu Arg Arg Val Lys Val Ser Ser Leu Pro Phe Ser
        35                  40                  45
Val Glu Ala Leu Met Ser Asp Lys Lys Pro Pro Lys Glu Ala Ser Pro
    50                  55                  60
Leu Pro Ala Glu Ser Ala Ser Ala Gly Ala Thr Leu Arg Pro Leu Leu
65                  70                  75                  80
Leu Ser Gly His Gly Ala Arg Glu Ala His Ser Pro Gly Pro Leu Val
                85                  90                  95
Lys Pro Phe Glu Thr Ala Ser Val Lys Ser Glu Asn Ser Glu Asp Gly
            100                 105                 110
Ala Ala Trp Met Gln Glu Pro Gly Arg Tyr Ser Pro Pro Pro Arg His
        115                 120                 125
Met Ser Pro Thr Thr Cys Thr Leu Arg Lys His Lys Thr Asn Arg Lys
    130                 135                 140
Pro Arg Thr Pro Phe Thr Thr Ser Gln Leu Leu Ala Leu Glu Arg Lys
145                 150                 155                 160
Phe Arg Gln Lys Gln Tyr Leu Ser Ile Ala Glu Arg Ala Glu Phe Ser
                165                 170                 175
Ser Ser Leu Asn Leu Thr Glu Thr Gln Val Lys Ile Trp Phe Gln Asn
            180                 185                 190
Arg Arg Ala Lys Ala Lys Arg Leu Gln Glu Ala Glu Leu Glu Lys Leu
        195                 200                 205
Lys Met Ala Ala Lys Pro Met Leu Pro Ser Ser Phe Ser Leu Pro Phe
    210                 215                 220
Pro Ile Ser Ser Pro Leu Gln Ala Ala Ser Ile Tyr Gly Ala Ser Tyr
225                 230                 235                 240
Pro Phe His Arg Pro Val Leu Pro Ile Pro Pro Val Gly Leu Tyr Ala
                245                 250                 255
Thr Pro Val Gly Tyr Gly Met Tyr His Leu Ser
            260                 265
```

<210> 248
<211> 387
<212> PRT
<213> Homo sapiens
<400> 248

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Met Pro Gly His Leu Gln Glu Gly Phe Gly Cys Val Val Thr Asn Arg
1               5                   10                  15
Phe Asp Gln Leu Phe Asp Asp Glu Ser Asp Pro Phe Glu Val Leu Lys
            20                  25                  30
```

```
Ala Ala Glu Asn Lys Lys Lys Glu Ala Gly Gly Gly Gly Val Gly Gly
        35                  40                  45
Pro Gly Ala Lys Ser Ala Ala Gln Ala Ala Ala Gln Thr Asn Ser Asn
    50                  55                  60
Ala Ala Gly Lys Gln Leu Arg Lys Glu Ser Gln Lys Asp Arg Lys Asn
65                  70                  75                  80
Pro Leu Pro Pro Ser Val Gly Val Val Asp Lys Lys Glu Glu Thr Gln
                85                  90                  95
Pro Pro Val Ala Leu Lys Lys Glu Gly Ile Arg Arg Val Gly Arg Arg
            100                 105                 110
Pro Asp Gln Gln Leu Gln Gly Glu Gly Lys Ile Ile Asp Arg Arg Pro
        115                 120                 125
Glu Arg Arg Pro Pro Arg Glu Arg Arg Phe Glu Lys Pro Leu Glu Glu
    130                 135                 140
Lys Gly Glu Gly Gly Glu Phe Ser Val Asp Arg Pro Ile Ile Asp Arg
145                 150                 155                 160
Pro Ile Arg Gly Arg Gly Gly Leu Gly Arg Gly Arg Gly Gly Arg Gly
                165                 170                 175
Arg Gly Met Gly Arg Gly Asp Gly Phe Asp Ser Arg Gly Lys Arg Glu
            180                 185                 190
Phe Asp Arg His Ser Gly Ser Asp Arg Ser Gly Leu Lys His Glu Asp
        195                 200                 205
Lys Arg Gly Gly Ser Gly Ser His Asn Trp Gly Thr Val Lys Asp Glu
    210                 215                 220
Leu Thr Asp Leu Asp Gln Ser Asn Val Thr Glu Glu Thr Pro Glu Gly
225                 230                 235                 240
Glu Glu His His Pro Val Ala Asp Thr Glu Asn Lys Glu Asn Glu Val
                245                 250                 255
Glu Glu Val Lys Glu Glu Gly Pro Lys Glu Met Thr Leu Asp Glu Trp
            260                 265                 270
Lys Ala Ile Gln Asn Lys Asp Arg Ala Lys Val Glu Phe Asn Ile Arg
        275                 280                 285
Lys Pro Asn Glu Gly Ala Asp Gly Gln Trp Lys Lys Gly Phe Val Leu
    290                 295                 300
His Lys Ser Lys Ser Glu Glu Ala His Ala Glu Asp Ser Val Met Asp
305                 310                 315                 320
His His Phe Arg Lys Pro Ala Asn Asp Ile Thr Ser Gln Leu Glu Ile
                325                 330                 335
Asn Phe Gly Asp Leu Gly Arg Pro Gly Arg Gly Gly Arg Gly Gly Arg
            340                 345                 350
Gly Gly Arg Gly Arg Gly Gly Arg Pro Asn Arg Gly Ser Arg Thr Asp
        355                 360                 365
Lys Ser Ser Ala Ser Ala Pro Asp Val Asp Asp Pro Glu Ala Phe Pro
    370                 375                 380
Ala Leu Ala
385

<210>  249
<211>  239
<212>  PRT
<213>  Homo sapiens
<400>  249
Met Ala Ser Thr Ala Val Gln Leu Leu Gly Phe Leu Leu Ser Phe Leu
1               5                   10                  15
Gly Met Val Gly Thr Leu Ile Thr Thr Ile Leu Pro His Trp Arg Arg
            20                  25                  30
Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser Tyr Leu Lys
        35                  40                  45
Gly Leu Trp Met Glu Cys Val Trp His Ser Thr Gly Ile Tyr Gln Cys
    50                  55                  60
Gln Ile Tyr Arg Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala
65                  70                  75                  80
Arg Ala Leu Met Val Ile Ser Cys Leu Leu Ser Gly Ile Ala Cys Ala
                85                  90                  95
Cys Ala Val Ile Gly Met Lys Cys Thr Arg Cys Ala Lys Gly Thr Pro
            100                 105                 110
Ala Lys Thr Thr Phe Ala Ile Leu Gly Gly Thr Leu Phe Ile Leu Ala
        115                 120                 125
Gly Leu Leu Cys Met Val Ala Val Ser Trp Thr Thr Asn Asp Val Val
```

130 135 140
Gln Asn Phe Tyr Asn Pro Leu Leu Pro Ser Gly Met Lys Phe Glu Ile
145 150 155 160
Gly Gln Ala Leu Tyr Leu Gly Phe Ile Ser Ser Ser Leu Ser Leu Ile
165 170 175
Gly Gly Thr Leu Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg
180 185 190
Pro Tyr Gln Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala
195 200 205
Pro Ala Tyr Gln Pro Pro Ala Ala Tyr Lys Asp Asn Arg Ala Pro Ser
210 215 220
Val Thr Ser Ala Thr His Ser Gly Tyr Arg Leu Asn Asp Tyr Val
225 230 235

<210> 250
<211> 414
<212> PRT
<213> Homo sapiens
<400> 250
Met Gln Thr Phe Leu Lys Gly Lys Arg Val Gly Tyr Trp Leu Ser Glu
1 5 10 15
Lys Lys Ile Lys Lys Leu Asn Phe Gln Ala Phe Ala Glu Leu Cys Arg
20 25 30
Lys Arg Gly Met Glu Val Val Gln Leu Asn Leu Ser Arg Pro Ile Glu
35 40 45
Glu Gln Gly Pro Leu Asp Val Ile Ile His Lys Leu Thr Asp Val Ile
50 55 60
Leu Glu Ala Asp Gln Asn Asp Ser Gln Ser Leu Glu Leu Val His Arg
65 70 75 80
Phe Gln Glu Tyr Ile Asp Ala His Pro Glu Thr Ile Val Leu Asp Pro
85 90 95
Leu Pro Ala Ile Arg Thr Leu Leu Asp Arg Ser Lys Ser Tyr Glu Leu
100 105 110
Ile Arg Lys Ile Glu Ala Tyr Met Glu Asp Asp Arg Ile Cys Ser Pro
115 120 125
Pro Phe Met Glu Leu Thr Ser Leu Cys Gly Asp Asp Thr Met Arg Leu
130 135 140
Leu Glu Lys Asn Gly Leu Thr Phe Pro Phe Ile Cys Lys Thr Arg Val
145 150 155 160
Ala His Gly Thr Asn Ser His Glu Met Ala Ile Val Phe Asn Gln Glu
165 170 175
Gly Leu Asn Ala Ile Gln Pro Pro Cys Val Val Gln Asn Phe Ile Asn
180 185 190
His Asn Ala Val Leu Tyr Lys Val Phe Val Val Gly Glu Ser Tyr Thr
195 200 205
Val Val Gln Arg Pro Ser Leu Lys Asn Phe Ser Ala Gly Thr Ser Asp
210 215 220
Arg Glu Ser Ile Phe Phe Asn Ser His Asn Val Ser Lys Pro Glu Ser
225 230 235 240
Ser Ser Val Leu Thr Glu Leu Asp Lys Ile Glu Gly Val Phe Glu Arg
245 250 255
Pro Ser Asp Glu Val Ile Arg Glu Leu Ser Arg Ala Leu Arg Gln Ala
260 265 270
Leu Gly Val Ser Leu Phe Gly Ile Asp Ile Ile Ile Asn Asn Gln Thr
275 280 285
Gly Gln His Ala Val Ile Asp Ile Asn Ala Phe Pro Gly Tyr Glu Gly
290 295 300
Val Ser Glu Phe Phe Thr Asp Leu Leu Asn His Ile Ala Thr Val Leu
305 310 315 320
Gln Gly Gln Ser Thr Ala Met Ala Ala Thr Gly Asp Val Ala Leu Leu
325 330 335
Arg His Ser Lys Leu Leu Ala Glu Pro Ala Gly Gly Leu Val Gly Glu
340 345 350
Arg Thr Cys Ser Ala Ser Pro Gly Cys Cys Gly Ser Met Met Gly Gln
355 360 365
Asp Ala Pro Trp Lys Ala Glu Ala Asp Ala Gly Gly Thr Ala Lys Leu
370 375 380
Pro His Gln Arg Leu Gly Cys Asn Ala Gly Val Ser Pro Ser Phe Gln
385 390 395 400

Gln His Cys Val Ala Ser Leu Ala Thr Lys Ala Ser Ser Gln
405 410

<210> 251
<211> 1255
<212> PRT
<213> Homo sapiens
<400> 251
Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu Leu
1 5 10 15
Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp Met Lys
20 25 30
Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met Leu Arg His
35 40 45
Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu Glu Leu Thr Tyr
50 55 60
Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln Asp Ile Gln Glu Val
65 70 75 80
Gln Gly Tyr Val Leu Ile Ala His Asn Gln Val Arg Gln Val Pro Leu
85 90 95
Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr
100 105 110
Ala Leu Ala Val Leu Asp Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro
115 120 125
Val Thr Gly Ala Ser Pro Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser
130 135 140
Leu Thr Glu Ile Leu Lys Gly Gly Val Leu Ile Gln Arg Asn Pro Gln
145 150 155 160
Leu Cys Tyr Gln Asp Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn
165 170 175
Asn Gln Leu Ala Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys
180 185 190
His Pro Cys Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser
195 200 205
Ser Glu Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys
210 215 220
Ala Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys
225 230 235 240
Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys Leu
245 250 255
His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala Leu Val
260 265 270
Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro Glu Gly Arg
275 280 285
Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu
290 295 300
Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln
305 310 315 320
Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys
325 330 335
Pro Cys Ala Arg Val Cys Tyr Gly Leu Gly Met Glu His Leu Arg Glu
340 345 350
Val Arg Ala Val Thr Ser Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys
355 360 365
Lys Ile Phe Gly Ser Leu Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp
370 375 380
Pro Ala Ser Asn Thr Ala Pro Leu Gln Pro Glu Gln Leu Gln Val Phe
385 390 395 400
Glu Thr Leu Glu Glu Ile Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro
405 410 415
Asp Ser Leu Pro Asp Leu Ser Val Phe Gln Asn Leu Gln Val Ile Arg
420 425 430
Gly Arg Ile Leu His Asn Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu
435 440 445
Gly Ile Ser Trp Leu Gly Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly
450 455 460
Leu Ala Leu Ile His His Asn Thr His Leu Cys Phe Val His Thr Val
465 470 475 480
Pro Trp Asp Gln Leu Phe Arg Asn Pro His Gln Ala Leu Leu His Thr

```
                485                 490                 495
Ala Asn Arg Pro Glu Asp Glu Cys Val Gly Glu Gly Leu Ala Cys His
            500                 505                 510
Gln Leu Cys Ala Arg Gly His Cys Trp Gly Pro Gly Pro Thr Gln Cys
        515                 520                 525
Val Asn Cys Ser Gln Phe Leu Arg Gly Gln Glu Cys Val Glu Glu Cys
    530                 535                 540
Arg Val Leu Gln Gly Leu Pro Arg Glu Tyr Val Asn Ala Arg His Cys
545                 550                 555                 560
Leu Pro Cys His Pro Glu Cys Gln Pro Gln Asn Gly Ser Val Thr Cys
                565                 570                 575
Phe Gly Pro Glu Ala Asp Gln Cys Val Ala Cys Ala His Tyr Lys Asp
            580                 585                 590
Pro Pro Phe Cys Val Ala Arg Cys Pro Ser Gly Val Lys Pro Asp Leu
        595                 600                 605
Ser Tyr Met Pro Ile Trp Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln
    610                 615                 620
Pro Cys Pro Ile Asn Cys Thr His Ser Cys Val Asp Leu Asp Asp Lys
625                 630                 635                 640
Gly Cys Pro Ala Glu Gln Arg Ala Ser Pro Leu Thr Ser Ile Val Ser
                645                 650                 655
Ala Val Val Gly Ile Leu Leu Val Val Val Leu Gly Val Val Phe Gly
            660                 665                 670
Ile Leu Ile Lys Arg Arg Gln Gln Lys Ile Arg Lys Tyr Thr Met Arg
        675                 680                 685
Arg Leu Leu Gln Glu Thr Glu Leu Val Glu Pro Leu Thr Pro Ser Gly
    690                 695                 700
Ala Met Pro Asn Gln Ala Gln Met Arg Ile Leu Lys Glu Thr Glu Leu
705                 710                 715                 720
Arg Lys Val Lys Val Leu Gly Ser Gly Ala Phe Gly Thr Val Tyr Lys
                725                 730                 735
Gly Ile Trp Ile Pro Asp Gly Glu Asn Val Lys Ile Pro Val Ala Ile
            740                 745                 750
Lys Val Leu Arg Glu Asn Thr Ser Pro Lys Ala Asn Lys Glu Ile Leu
        755                 760                 765
Asp Glu Ala Tyr Val Met Ala Gly Val Gly Ser Pro Tyr Val Ser Arg
    770                 775                 780
Leu Leu Gly Ile Cys Leu Thr Ser Thr Val Gln Leu Val Thr Gln Leu
785                 790                 795                 800
Met Pro Tyr Gly Cys Leu Leu Asp His Val Arg Glu Asn Arg Gly Arg
                805                 810                 815
Leu Gly Ser Gln Asp Leu Leu Asn Trp Cys Met Gln Ile Ala Lys Gly
            820                 825                 830
Met Ser Tyr Leu Glu Asp Val Arg Leu Val His Arg Asp Leu Ala Ala
        835                 840                 845
Arg Asn Val Leu Val Lys Ser Pro Asn His Val Lys Ile Thr Asp Phe
    850                 855                 860
Gly Leu Ala Arg Leu Leu Asp Ile Asp Glu Thr Glu Tyr His Ala Asp
865                 870                 875                 880
Gly Gly Lys Val Pro Ile Lys Trp Met Ala Leu Glu Ser Ile Leu Arg
                885                 890                 895
Arg Arg Phe Thr His Gln Ser Asp Val Trp Ser Tyr Gly Val Thr Val
            900                 905                 910
Trp Glu Leu Met Thr Phe Gly Ala Lys Pro Tyr Asp Gly Ile Pro Ala
        915                 920                 925
Arg Glu Ile Pro Asp Leu Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro
    930                 935                 940
Pro Ile Cys Thr Ile Asp Val Tyr Met Ile Met Val Lys Cys Trp Met
945                 950                 955                 960
Ile Asp Ser Glu Cys Arg Pro Arg Phe Arg Glu Leu Val Ser Glu Phe
                965                 970                 975
Ser Arg Met Ala Arg Asp Pro Gln Arg Phe Val Val Ile Gln Asn Glu
            980                 985                 990
Asp Leu Gly Pro Ala Ser Pro Leu  Asp Ser Thr Phe Tyr  Arg Ser Leu
        995                 1000                1005
Leu Glu  Asp Asp Asp Met Gly  Asp Leu Val Asp Ala  Glu Glu Tyr
    1010                1015                1020
Leu Val  Pro Gln Gln Gly Phe  Phe Cys Pro Asp Pro  Ala Pro Gly
    1025                1030                1035
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Ala Gly Gly Met Val His His Arg His Arg Ser Ser Ser Thr Arg
1040 1045 1050
Ser Gly Gly Gly Asp Leu Thr Leu Gly Leu Glu Pro Ser Glu Glu
1055 1060 1065
Glu Ala Pro Arg Ser Pro Leu Ala Pro Ser Glu Gly Ala Gly Ser
1070 1075 1080
Asp Val Phe Asp Gly Asp Leu Gly Met Gly Ala Ala Lys Gly Leu
1085 1090 1095
Gln Ser Leu Pro Thr His Asp Pro Ser Pro Leu Gln Arg Tyr Ser
1100 1105 1110
Glu Asp Pro Thr Val Pro Leu Pro Ser Glu Thr Asp Gly Tyr Val
1115 1120 1125
Ala Pro Leu Thr Cys Ser Pro Gln Pro Glu Tyr Val Asn Gln Pro
1130 1135 1140
Asp Val Arg Pro Gln Pro Pro Ser Pro Arg Glu Gly Pro Leu Pro
1145 1150 1155
Ala Ala Arg Pro Ala Gly Ala Thr Leu Glu Arg Ala Lys Thr Leu
1160 1165 1170
Ser Pro Gly Lys Asn Gly Val Val Lys Asp Val Phe Ala Phe Gly
1175 1180 1185
Gly Ala Val Glu Asn Pro Glu Tyr Leu Thr Pro Gln Gly Gly Ala
1190 1195 1200
Ala Pro Gln Pro His Pro Pro Pro Ala Phe Ser Pro Ala Phe Asp
1205 1210 1215
Asn Leu Tyr Tyr Trp Asp Gln Asp Pro Pro Glu Arg Gly Ala Pro
1220 1225 1230
Pro Ser Thr Phe Lys Gly Thr Pro Thr Ala Glu Asn Pro Glu Tyr
1235 1240 1245
Leu Gly Leu Asp Val Pro Val
1250 1255

<210> 252
<211> 393
<212> PRT
<213> Homo sapiens
<400> 252
Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln
1 5 10 15
Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu
20 25 30
Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp
35 40 45
Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro
50 55 60
Arg Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro
65 70 75 80
Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser
85 90 95
Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly
100 105 110
Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro
115 120 125
Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln
130 135 140
Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met
145 150 155 160
Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys
165 170 175
Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln
180 185 190
His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp
195 200 205
Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu
210 215 220
Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser
225 230 235 240
Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr
245 250 255
Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val

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            260                 265                 270
Arg Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn
        275                 280                 285
Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr
    290                 295                 300
Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys
305                 310                 315                 320
Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu
                325                 330                 335
Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp
            340                 345                 350
Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His
        355                 360                 365
Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met
    370                 375                 380
Phe Lys Thr Glu Gly Pro Asp Ser Asp
385                 390

<210>  253
<211>  639
<212>  PRT
<213>  Homo sapiens
<400>  253
Met Ser Ala Arg Gly Pro Ala Ile Gly Ile Asp Leu Gly Thr Thr Tyr
1               5                   10                  15
Ser Cys Val Gly Val Phe Gln His Gly Lys Val Glu Ile Ile Ala Asn
            20                  25                  30
Asp Gln Gly Asn Arg Thr Thr Pro Ser Tyr Val Ala Phe Thr Asp Thr
        35                  40                  45
Glu Arg Leu Ile Gly Asp Ala Ala Lys Asn Gln Val Ala Met Asn Pro
    50                  55                  60
Thr Asn Thr Ile Phe Asp Ala Lys Arg Leu Ile Gly Arg Lys Phe Glu
65                  70                  75                  80
Asp Ala Thr Val Gln Ser Asp Met Lys His Trp Pro Phe Arg Val Val
                85                  90                  95
Ser Glu Gly Gly Lys Pro Lys Val Gln Val Glu Tyr Lys Gly Glu Thr
            100                 105                 110
Lys Thr Phe Phe Pro Glu Glu Ile Ser Ser Met Val Leu Thr Lys Met
        115                 120                 125
Lys Glu Ile Ala Glu Ala Tyr Leu Gly Gly Lys Val His Ser Ala Val
    130                 135                 140
Ile Thr Val Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln Ala Thr Lys
145                 150                 155                 160
Asp Ala Gly Thr Ile Thr Gly Leu Asn Val Leu Arg Ile Ile Asn Glu
                165                 170                 175
Pro Thr Ala Ala Ala Ile Ala Tyr Gly Leu Asp Lys Lys Gly Cys Ala
            180                 185                 190
Gly Gly Glu Lys Asn Val Leu Ile Phe Asp Leu Gly Gly Gly Thr Phe
        195                 200                 205
Asp Val Ser Ile Leu Thr Ile Glu Asp Gly Ile Phe Glu Val Lys Ser
    210                 215                 220
Thr Ala Gly Asp Thr His Leu Gly Gly Glu Asp Phe Asp Asn Arg Met
225                 230                 235                 240
Val Ser His Leu Ala Glu Glu Phe Lys Arg Lys His Lys Lys Asp Ile
                245                 250                 255
Gly Pro Asn Lys Arg Ala Val Arg Arg Leu Arg Thr Ala Cys Glu Arg
            260                 265                 270
Ala Lys Arg Thr Leu Ser Ser Ser Thr Gln Ala Ser Ile Glu Ile Asp
        275                 280                 285
Ser Leu Tyr Glu Gly Val Asp Phe Tyr Thr Ser Ile Thr Arg Ala Arg
    290                 295                 300
Phe Glu Glu Leu Asn Ala Asp Leu Phe Arg Gly Thr Leu Glu Pro Val
305                 310                 315                 320
Glu Lys Ala Leu Arg Asp Ala Lys Leu Asp Lys Gly Gln Ile Gln Glu
                325                 330                 335
Ile Val Leu Val Gly Gly Ser Thr Arg Ile Pro Lys Ile Gln Lys Leu
            340                 345                 350
Leu Gln Asp Phe Phe Asn Gly Lys Glu Leu Asn Lys Ser Ile Asn Pro
        355                 360                 365
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Asp Glu Ala Val Ala Tyr Gly Ala Ala Val Gln Ala Ala Ile Leu Ile
370 375 380
Gly Asp Lys Ser Glu Asn Val Gln Asp Leu Leu Leu Leu Asp Val Thr
385 390 395 400
Pro Leu Ser Leu Gly Ile Glu Thr Ala Gly Gly Val Met Thr Pro Leu
405 410 415
Ile Lys Arg Asn Thr Thr Ile Pro Thr Lys Gln Thr Gln Thr Phe Thr
420 425 430
Thr Tyr Ser Asp Asn Gln Ser Ser Val Leu Val Gln Val Tyr Glu Gly
435 440 445
Glu Arg Ala Met Thr Lys Asp Asn Asn Leu Leu Gly Lys Phe Asp Leu
450 455 460
Thr Gly Ile Pro Pro Ala Pro Arg Gly Val Pro Gln Ile Glu Val Thr
465 470 475 480
Phe Asp Ile Asp Ala Asn Gly Ile Leu Asn Val Thr Ala Ala Asp Lys
485 490 495
Ser Thr Gly Lys Glu Asn Lys Ile Thr Ile Thr Asn Asp Lys Gly Arg
500 505 510
Leu Ser Lys Asp Asp Ile Asp Arg Met Val Gln Glu Ala Glu Arg Tyr
515 520 525
Lys Ser Glu Asp Glu Ala Asn Arg Asp Arg Val Ala Ala Lys Asn Ala
530 535 540
Leu Glu Ser Tyr Thr Tyr Asn Ile Lys Gln Thr Val Glu Asp Glu Lys
545 550 555 560
Leu Arg Gly Lys Ile Ser Glu Gln Asp Lys Asn Lys Ile Leu Asp Lys
565 570 575
Cys Gln Glu Val Ile Asn Trp Leu Asp Arg Asn Gln Met Ala Glu Lys
580 585 590
Asp Glu Tyr Glu His Lys Gln Lys Glu Leu Glu Arg Val Cys Asn Pro
595 600 605
Ile Ile Ser Lys Leu Tyr Gln Gly Gly Pro Gly Gly Gly Ser Gly Gly
610 615 620
Gly Gly Ser Gly Ala Ser Gly Gly Pro Thr Ile Glu Glu Val Asp
625 630 635

<210> 254
<211> 1094
<212> PRT
<213> Homo sapiens
<400> 254
Met Ala Arg Pro Val Arg Gly Gly Leu Gly Ala Pro Arg Arg Ser Pro
1 5 10 15
Cys Leu Leu Leu Leu Trp Leu Leu Leu Leu Arg Leu Glu Pro Val Thr
20 25 30
Ala Ala Ala Gly Pro Arg Ala Pro Cys Ala Ala Ala Cys Thr Cys Ala
35 40 45
Gly Asp Ser Leu Asp Cys Gly Gly Arg Gly Leu Ala Ala Leu Pro Gly
50 55 60
Asp Leu Pro Ser Trp Thr Arg Ser Leu Asn Leu Ser Tyr Asn Lys Leu
65 70 75 80
Ser Glu Ile Asp Pro Ala Gly Phe Glu Asp Leu Pro Asn Leu Gln Glu
85 90 95
Val Tyr Leu Asn Asn Asn Glu Leu Thr Ala Val Pro Ser Leu Gly Ala
100 105 110
Ala Ser Ser His Val Val Ser Leu Phe Leu Gln His Asn Lys Ile Arg
115 120 125
Ser Val Glu Gly Ser Gln Leu Lys Ala Tyr Leu Ser Leu Glu Val Leu
130 135 140
Asp Leu Ser Leu Asn Asn Ile Thr Glu Val Arg Asn Thr Cys Phe Pro
145 150 155 160
His Gly Pro Pro Ile Lys Glu Leu Asn Leu Ala Gly Asn Arg Ile Gly
165 170 175
Thr Leu Glu Leu Gly Ala Phe Asp Gly Leu Ser Arg Ser Leu Leu Thr
180 185 190
Leu Arg Leu Ser Lys Asn Arg Ile Thr Gln Leu Pro Val Arg Ala Phe
195 200 205
Lys Leu Pro Arg Leu Thr Gln Leu Asp Leu Asn Arg Asn Arg Ile Arg
210 215 220
Leu Ile Glu Gly Leu Thr Phe Gln Gly Leu Asn Ser Leu Glu Val Leu

225 230 235 240
Lys Leu Gln Arg Asn Asn Ile Ser Lys Leu Thr Asp Gly Ala Phe Trp
245 250 255
Gly Leu Ser Lys Met His Val Leu His Leu Glu Tyr Asn Ser Leu Val
260 265 270
Glu Val Asn Ser Gly Ser Leu Tyr Gly Leu Thr Ala Leu His Gln Leu
275 280 285
His Leu Ser Asn Asn Ser Ile Ala Arg Ile His Arg Lys Gly Trp Ser
290 295 300
Phe Cys Gln Lys Leu His Glu Leu Val Leu Ser Phe Asn Asn Leu Thr
305 310 315 320
Arg Leu Asp Glu Glu Ser Leu Ala Glu Leu Ser Ser Leu Ser Val Leu
325 330 335
Arg Leu Ser His Asn Ser Ile Ser His Ile Ala Glu Gly Ala Phe Lys
340 345 350
Gly Leu Arg Ser Leu Arg Val Leu Asp Leu Asp His Asn Glu Ile Ser
355 360 365
Gly Thr Ile Glu Asp Thr Ser Gly Ala Phe Ser Gly Leu Asp Ser Leu
370 375 380
Ser Lys Leu Thr Leu Phe Gly Asn Lys Ile Lys Ser Val Ala Lys Arg
385 390 395 400
Ala Phe Ser Gly Leu Glu Gly Leu Glu His Leu Asn Leu Gly Gly Asn
405 410 415
Ala Ile Arg Ser Val Gln Phe Asp Ala Phe Val Lys Met Lys Asn Leu
420 425 430
Lys Glu Leu His Ile Ser Ser Asp Ser Phe Leu Cys Asp Cys Gln Leu
435 440 445
Lys Trp Leu Pro Pro Trp Leu Ile Gly Arg Met Leu Gln Ala Phe Val
450 455 460
Thr Ala Thr Cys Ala His Pro Glu Ser Leu Lys Gly Gln Ser Ile Phe
465 470 475 480
Ser Val Pro Pro Glu Ser Phe Val Cys Asp Asp Phe Leu Lys Pro Gln
485 490 495
Ile Ile Thr Gln Pro Glu Thr Thr Met Ala Met Val Gly Lys Asp Ile
500 505 510
Arg Phe Thr Cys Ser Ala Ala Ser Ser Ser Ser Ser Pro Met Thr Phe
515 520 525
Ala Trp Lys Lys Asp Asn Glu Val Leu Thr Asn Ala Asp Met Glu Asn
530 535 540
Phe Val His Val His Ala Gln Asp Gly Glu Val Met Glu Tyr Thr Thr
545 550 555 560
Ile Leu His Leu Arg Gln Val Thr Phe Gly His Glu Gly Arg Tyr Gln
565 570 575
Cys Val Ile Thr Asn His Phe Gly Ser Thr Tyr Ser His Lys Ala Arg
580 585 590
Leu Thr Val Asn Val Leu Pro Ser Phe Thr Lys Thr Pro His Asp Ile
595 600 605
Thr Ile Arg Thr Thr Thr Met Ala Arg Leu Glu Cys Ala Ala Thr Gly
610 615 620
His Pro Asn Pro Gln Ile Ala Trp Gln Lys Asp Gly Gly Thr Asp Phe
625 630 635 640
Pro Ala Ala Arg Glu Arg Arg Met His Val Met Pro Asp Asp Asp Val
645 650 655
Phe Phe Ile Thr Asp Val Lys Ile Asp Asp Ala Gly Val Tyr Ser Cys
660 665 670
Thr Ala Gln Asn Ser Ala Gly Ser Ile Ser Ala Asn Ala Thr Leu Thr
675 680 685
Val Leu Glu Thr Pro Ser Leu Val Val Pro Leu Glu Asp Arg Val Val
690 695 700
Ser Val Gly Glu Thr Val Ala Leu Gln Cys Lys Ala Thr Gly Asn Pro
705 710 715 720
Pro Pro Arg Ile Thr Trp Phe Lys Gly Asp Arg Pro Leu Ser Leu Thr
725 730 735
Glu Arg His His Leu Thr Pro Asp Asn Gln Leu Leu Val Val Gln Asn
740 745 750
Val Val Ala Glu Asp Ala Gly Arg Tyr Thr Cys Glu Met Ser Asn Thr
755 760 765
Leu Gly Thr Glu Arg Ala His Ser Gln Leu Ser Val Leu Pro Ala Ala
770 775 780

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Gly Cys Arg Lys Asp Gly Thr Thr Val Gly Ile Phe Thr Ile Ala Val
785                 790                 795                 800
Val Ser Ser Ile Val Leu Thr Ser Leu Val Trp Val Cys Ile Ile Tyr
                805                 810                 815
Gln Thr Arg Lys Lys Ser Glu Glu Tyr Ser Val Thr Asn Thr Asp Glu
            820                 825                 830
Thr Val Val Pro Pro Asp Val Pro Ser Tyr Leu Ser Ser Gln Gly Thr
        835                 840                 845
Leu Ser Asp Arg Gln Glu Thr Val Val Arg Thr Glu Gly Ala Gly Pro
    850                 855                 860
Gln Ala Asn Gly His Ile Glu Ser Asn Gly Val Cys Pro Arg Asp Ala
865                 870                 875                 880
Ser His Phe Pro Glu Pro Asp Thr His Ser Val Ala Cys Arg Gln Pro
                885                 890                 895
Lys Leu Cys Ala Gly Ser Ala Tyr His Lys Glu Pro Trp Lys Ala Ile
            900                 905                 910
Glu Lys Ala Glu Gly Thr Pro Gly Pro His Lys Met Glu His Gly Gly
        915                 920                 925
Arg Val Val Cys Ser Asp Cys Asn Thr Glu Val Asp Cys Tyr Ser Arg
    930                 935                 940
Gly Gln Ala Phe His Pro Gln Pro Val Ser Arg Asp Ser Ala Gln Pro
945                 950                 955                 960
Ser Ala Pro Asn Gly Pro Glu Pro Gly Gly Ser Asp Gln Glu His Ser
                965                 970                 975
Pro His His Gln Cys Ser Arg Thr Ala Ala Gly Ser Cys Pro Glu Cys
            980                 985                 990
Gln Gly Ser Leu Tyr Pro Ser Asn  His Asp Arg Met Leu  Thr Ala Val
        995                 1000                1005
Lys Lys  Lys Pro Met Ala Ser  Leu Asp Gly Lys Gly  Asp Ser Ser
    1010                1015                1020
Trp Thr  Leu Ala Arg Leu Tyr  His Pro Asp Ser Thr  Glu Leu Gln
    1025                1030                1035
Pro Ala  Ser Ser Leu Thr Ser  Gly Ser Pro Glu Arg  Ala Glu Ala
    1040                1045                1050
Gln Tyr  Leu Leu Val Ser Asn  Gly His Leu Pro Lys  Ala Cys Asp
    1055                1060                1065
Ala Ser  Pro Glu Ser Thr Pro  Leu Thr Gly Gln Leu  Pro Gly Lys
    1070                1075                1080
Gln Arg  Val Pro Leu Leu Leu  Ala Pro Lys Ser
    1085                1090
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<210> 255
<211> 474
<212> PRT
<213> Homo sapiens
<400> 255

```
Met Ala Thr Asn Trp Gly Ser Leu Leu Gln Asp Lys Gln Gln Leu Glu
1               5                   10                  15
Glu Leu Ala Arg Gln Ala Val Asp Arg Ala Leu Ala Glu Gly Val Leu
            20                  25                  30
Leu Arg Thr Ser Gln Glu Pro Thr Ser Ser Glu Val Val Ser Tyr Ala
        35                  40                  45
Pro Phe Thr Leu Phe Pro Ser Leu Val Pro Ser Ala Leu Leu Glu Gln
    50                  55                  60
Ala Tyr Ala Val Gln Met Asp Phe Asn Leu Leu Val Asp Ala Val Ser
65                  70                  75                  80
Gln Asn Ala Ala Phe Leu Glu Gln Thr Leu Ser Ser Thr Ile Lys Gln
                85                  90                  95
Asp Asp Phe Thr Ala Arg Leu Phe Asp Ile His Lys Gln Val Leu Lys
            100                 105                 110
Glu Gly Ile Ala Gln Thr Val Phe Leu Gly Leu Asn Arg Ser Asp Tyr
        115                 120                 125
Met Phe Gln Arg Ser Ala Asp Gly Ser Pro Ala Leu Lys Gln Ile Glu
    130                 135                 140
Ile Asn Thr Ile Ser Ala Ser Phe Gly Gly Leu Ala Ser Arg Thr Pro
145                 150                 155                 160
Ala Val His Arg His Val Leu Ser Val Leu Ser Lys Thr Lys Glu Ala
                165                 170                 175
Gly Lys Ile Leu Ser Asn Asn Pro Ser Lys Gly Leu Ala Leu Gly Ile
```

180 185 190
Ala Lys Ala Trp Glu Leu Tyr Gly Ser Pro Asn Ala Leu Val Leu Leu
195 200 205
Ile Ala Gln Glu Lys Glu Arg Asn Ile Phe Asp Gln Arg Ala Ile Glu
210 215 220
Asn Glu Leu Leu Ala Arg Asn Ile His Val Ile Arg Arg Thr Phe Glu
225 230 235 240
Asp Ile Ser Glu Lys Gly Ser Leu Asp Gln Asp Arg Arg Leu Phe Val
245 250 255
Asp Gly Gln Glu Ile Ala Val Val Tyr Phe Arg Asp Gly Tyr Met Pro
260 265 270
Arg Gln Tyr Ser Leu Gln Asn Trp Glu Ala Arg Leu Leu Leu Glu Arg
275 280 285
Ser His Ala Ala Lys Cys Pro Asp Ile Ala Thr Gln Leu Ala Gly Thr
290 295 300
Lys Lys Val Gln Gln Glu Leu Ser Arg Pro Gly Met Leu Glu Met Leu
305 310 315 320
Leu Pro Gly Gln Pro Glu Ala Val Ala Arg Leu Arg Ala Thr Phe Ala
325 330 335
Gly Leu Tyr Ser Leu Asp Val Gly Glu Glu Gly Asp Gln Ala Ile Ala
340 345 350
Glu Ala Leu Ala Ala Pro Ser Arg Phe Val Leu Lys Pro Gln Arg Glu
355 360 365
Gly Gly Gly Asn Asn Leu Tyr Gly Glu Glu Met Val Gln Ala Leu Lys
370 375 380
Gln Leu Lys Asp Ser Glu Glu Arg Ala Ser Tyr Ile Leu Met Glu Lys
385 390 395 400
Ile Glu Pro Glu Pro Phe Glu Asn Cys Leu Leu Arg Pro Gly Ser Pro
405 410 415
Ala Arg Val Val Gln Cys Ile Ser Glu Leu Gly Ile Phe Gly Val Tyr
420 425 430
Val Arg Gln Glu Lys Thr Leu Val Met Asn Lys His Val Gly His Leu
435 440 445
Leu Arg Thr Lys Ala Ile Glu His Ala Asp Gly Gly Val Ala Ala Gly
450 455 460
Val Ala Val Leu Asp Asn Pro Tyr Pro Val
465 470

<210> 256
<211> 96
<212> PRT
<213> Homo sapiens
<400> 256
Met Trp Ile Tyr Ser Lys Leu Ser Lys Arg Thr Val Phe Arg Lys Gly
1 5 10 15
Lys Thr Arg Thr Gln Lys Thr Leu Gly Ile Thr Thr Thr Pro Lys Cys
20 25 30
Phe Arg Leu Gln Glu Ile Thr Ile His Val Phe Ala Gly Gly His Thr
35 40 45
Ile Phe Pro Tyr Tyr Leu Val Gln Asn Asp Ser Ser Leu Pro Lys Ser
50 55 60
Phe Phe Ser Asn His Asp Phe Pro Ile Tyr Phe Gly Pro Met Gln Ser
65 70 75 80
His Ser Leu Trp Pro Ile Val Ser Leu Pro Thr Thr Pro Leu Gly Gly
85 90 95

<210> 257
<211> 3256
<212> PRT
<213> Homo sapiens
<400> 257
Met Trp Pro Thr Arg Arg Leu Val Thr Ile Lys Arg Ser Gly Val Asp
1 5 10 15
Gly Pro His Phe Pro Leu Ser Leu Ser Thr Cys Leu Phe Gly Arg Gly
20 25 30
Ile Glu Cys Asp Ile Arg Ile Gln Leu Pro Val Val Ser Lys Gln His
35 40 45
Cys Lys Ile Glu Ile His Glu Gln Glu Ala Ile Leu His Asn Phe Ser
50 55 60

Ser Thr Asn Pro Thr Gln Val Asn Gly Ser Val Ile Asp Glu Pro Val
65 70 75 80
Arg Leu Lys His Gly Asp Val Ile Thr Ile Ile Asp Arg Ser Phe Arg
85 90 95
Tyr Glu Asn Glu Ser Leu Gln Asn Gly Arg Lys Ser Thr Glu Phe Pro
100 105 110
Arg Lys Ile Arg Glu Gln Glu Pro Ala Arg Arg Val Ser Arg Ser Ser
115 120 125
Phe Ser Ser Asp Pro Asp Glu Lys Ala Gln Asp Ser Lys Ala Tyr Ser
130 135 140
Lys Ile Thr Glu Gly Lys Val Ser Gly Asn Pro Gln Val His Ile Lys
145 150 155 160
Asn Val Lys Glu Asp Ser Thr Ala Asp Asp Ser Lys Asp Ser Val Ala
165 170 175
Gln Gly Thr Thr Asn Val His Ser Ser Glu His Ala Gly Arg Asn Gly
180 185 190
Arg Asn Ala Ala Asp Pro Ile Ser Gly Asp Phe Lys Glu Ile Ser Ser
195 200 205
Val Lys Leu Val Ser Arg Tyr Gly Glu Leu Lys Ser Val Pro Thr Thr
210 215 220
Gln Cys Leu Asp Asn Ser Lys Lys Asn Glu Ser Pro Phe Trp Lys Leu
225 230 235 240
Tyr Glu Ser Val Lys Lys Glu Leu Asp Val Lys Ser Gln Lys Glu Asn
245 250 255
Val Leu Gln Tyr Cys Arg Lys Ser Gly Leu Gln Thr Asp Tyr Ala Thr
260 265 270
Glu Lys Glu Ser Ala Asp Gly Leu Gln Gly Glu Thr Gln Leu Leu Val
275 280 285
Ser Arg Lys Ser Arg Pro Lys Ser Gly Gly Ser Gly His Ala Val Ala
290 295 300
Glu Pro Ala Ser Pro Glu Gln Glu Leu Asp Gln Asn Lys Gly Lys Gly
305 310 315 320
Arg Asp Val Glu Ser Val Gln Thr Pro Ser Lys Ala Val Gly Ala Ser
325 330 335
Phe Pro Leu Tyr Glu Pro Ala Lys Met Lys Thr Pro Val Gln Tyr Ser
340 345 350
Gln Gln Gln Asn Ser Pro Gln Lys His Lys Asn Lys Asp Leu Tyr Thr
355 360 365
Thr Gly Arg Arg Glu Ser Val Asn Leu Gly Lys Ser Glu Gly Phe Lys
370 375 380
Ala Gly Asp Lys Thr Leu Thr Pro Arg Lys Leu Ser Thr Arg Asn Arg
385 390 395 400
Thr Pro Ala Lys Val Glu Asp Ala Ala Asp Ser Ala Thr Lys Pro Glu
405 410 415
Asn Leu Ser Ser Lys Thr Arg Gly Ser Ile Pro Thr Asp Val Glu Val
420 425 430
Leu Pro Thr Glu Thr Glu Ile His Asn Glu Pro Phe Leu Thr Leu Trp
435 440 445
Leu Thr Gln Val Glu Arg Lys Ile Gln Lys Asp Ser Leu Ser Lys Pro
450 455 460
Glu Lys Leu Gly Thr Thr Ala Gly Gln Met Cys Ser Gly Leu Pro Gly
465 470 475 480
Leu Ser Ser Val Asp Ile Asn Asn Phe Gly Asp Ser Ile Asn Glu Ser
485 490 495
Glu Gly Ile Pro Leu Lys Arg Arg Arg Val Ser Phe Gly Gly His Leu
500 505 510
Arg Pro Glu Leu Phe Asp Glu Asn Leu Pro Pro Asn Thr Pro Leu Lys
515 520 525
Arg Gly Glu Ala Pro Thr Lys Arg Lys Ser Leu Val Met His Thr Pro
530 535 540
Pro Val Leu Lys Lys Ile Ile Lys Glu Gln Pro Gln Pro Ser Gly Lys
545 550 555 560
Gln Glu Ser Gly Ser Glu Ile His Val Glu Val Lys Ala Gln Ser Leu
565 570 575
Val Ile Ser Pro Pro Ala Pro Ser Pro Arg Lys Thr Pro Val Ala Ser
580 585 590
Asp Gln Arg Arg Arg Ser Cys Lys Thr Ala Pro Ala Ser Ser Ser Lys
595 600 605
Ser Gln Thr Glu Val Pro Lys Arg Gly Gly Glu Arg Val Ala Thr Cys

610 615 620
Leu Gln Lys Arg Val Ser Ile Ser Arg Ser Gln His Asp Ile Leu Gln
625 630 635 640
Met Ile Cys Ser Lys Arg Arg Ser Gly Ala Ser Glu Ala Asn Leu Ile
645 650 655
Val Ala Lys Ser Trp Ala Asp Val Val Lys Leu Gly Ala Lys Gln Thr
660 665 670
Gln Thr Lys Val Ile Lys His Gly Pro Gln Arg Ser Met Asn Lys Arg
675 680 685
Gln Arg Arg Pro Ala Thr Pro Lys Lys Pro Val Gly Glu Val His Ser
690 695 700
Gln Phe Ser Thr Gly His Ala Asn Ser Pro Cys Thr Ile Ile Ile Gly
705 710 715 720
Lys Ala His Thr Glu Lys Val His Val Pro Ala Arg Pro Tyr Arg Val
725 730 735
Leu Asn Asn Phe Ile Ser Asn Gln Lys Met Asp Phe Lys Glu Asp Leu
740 745 750
Ser Gly Ile Ala Glu Met Phe Lys Thr Pro Val Lys Glu Gln Pro Gln
755 760 765
Leu Thr Ser Thr Cys His Ile Ala Ile Ser Asn Ser Glu Asn Leu Leu
770 775 780
Gly Lys Gln Phe Gln Gly Thr Asp Ser Gly Glu Glu Pro Leu Leu Pro
785 790 795 800
Thr Ser Glu Ser Phe Gly Gly Asn Val Phe Phe Ser Ala Gln Asn Ala
805 810 815
Ala Lys Gln Pro Ser Asp Lys Cys Ser Ala Ser Pro Pro Leu Arg Arg
820 825 830
Gln Cys Ile Arg Glu Asn Gly Asn Val Ala Lys Thr Pro Arg Asn Thr
835 840 845
Tyr Lys Met Thr Ser Leu Glu Thr Lys Thr Ser Asp Thr Glu Thr Glu
850 855 860
Pro Ser Lys Thr Val Ser Thr Val Asn Arg Ser Gly Arg Ser Thr Glu
865 870 875 880
Phe Arg Asn Ile Gln Lys Leu Pro Val Glu Ser Lys Ser Glu Glu Thr
885 890 895
Asn Thr Glu Ile Val Glu Cys Ile Leu Lys Arg Gly Gln Lys Ala Thr
900 905 910
Leu Leu Gln Gln Arg Arg Glu Gly Glu Met Lys Glu Ile Glu Arg Pro
915 920 925
Phe Glu Thr Tyr Lys Glu Asn Ile Glu Leu Lys Glu Asn Asp Glu Lys
930 935 940
Met Lys Ala Met Lys Arg Ser Arg Thr Trp Gly Gln Lys Cys Ala Pro
945 950 955 960
Met Ser Asp Leu Thr Asp Leu Lys Ser Leu Pro Asp Thr Glu Leu Met
965 970 975
Lys Asp Thr Ala Arg Gly Gln Asn Leu Leu Gln Thr Gln Asp His Ala
980 985 990
Lys Ala Pro Lys Ser Glu Lys Gly Lys Ile Thr Lys Met Pro Cys Gln
995 1000 1005
Ser Leu Gln Pro Glu Pro Ile Asn Thr Pro Thr His Thr Lys Gln
1010 1015 1020
Gln Leu Lys Ala Ser Leu Gly Lys Val Gly Val Lys Glu Glu Leu
1025 1030 1035
Leu Ala Val Gly Lys Phe Thr Arg Thr Ser Gly Glu Thr Thr His
1040 1045 1050
Thr His Arg Glu Pro Ala Gly Asp Gly Lys Ser Ile Arg Thr Phe
1055 1060 1065
Lys Glu Ser Pro Lys Gln Ile Leu Asp Pro Ala Ala Arg Val Thr
1070 1075 1080
Gly Met Lys Lys Trp Pro Arg Thr Pro Lys Glu Glu Ala Gln Ser
1085 1090 1095
Leu Glu Asp Leu Ala Gly Phe Lys Glu Leu Phe Gln Thr Pro Gly
1100 1105 1110
Pro Ser Glu Glu Ser Met Thr Asp Glu Lys Thr Thr Lys Ile Ala
1115 1120 1125
Cys Lys Ser Pro Pro Pro Glu Ser Val Asp Thr Pro Thr Ser Thr
1130 1135 1140
Lys Gln Trp Pro Lys Arg Ser Leu Arg Lys Ala Asp Val Glu Glu
1145 1150 1155

Glu Phe Leu Ala Leu Arg Lys Leu Thr Pro Ser Ala Gly Lys Ala
1160 1165 1170
Met Leu Thr Pro Lys Pro Ala Gly Gly Asp Glu Lys Asp Ile Lys
1175 1180 1185
Ala Phe Met Gly Thr Pro Val Gln Lys Leu Asp Leu Ala Gly Thr
1190 1195 1200
Leu Pro Gly Ser Lys Arg Gln Leu Gln Thr Pro Lys Glu Lys Ala
1205 1210 1215
Gln Ala Leu Glu Asp Leu Ala Gly Phe Lys Glu Leu Phe Gln Thr
1220 1225 1230
Pro Gly His Thr Glu Glu Leu Val Ala Ala Gly Lys Thr Thr Lys
1235 1240 1245
Ile Pro Cys Asp Ser Pro Gln Ser Asp Pro Val Asp Thr Pro Thr
1250 1255 1260
Ser Thr Lys Gln Arg Pro Lys Arg Ser Ile Arg Lys Ala Asp Val
1265 1270 1275
Glu Gly Glu Leu Leu Ala Cys Arg Asn Leu Met Pro Ser Ala Gly
1280 1285 1290
Lys Ala Met His Thr Pro Lys Pro Ser Val Gly Glu Glu Lys Asp
1295 1300 1305
Ile Ile Ile Phe Val Gly Thr Pro Val Gln Lys Leu Asp Leu Thr
1310 1315 1320
Glu Asn Leu Thr Gly Ser Lys Arg Arg Pro Gln Thr Pro Lys Glu
1325 1330 1335
Glu Ala Gln Ala Leu Glu Asp Leu Thr Gly Phe Lys Glu Leu Phe
1340 1345 1350
Gln Thr Pro Gly His Thr Glu Glu Ala Val Ala Ala Gly Lys Thr
1355 1360 1365
Thr Lys Met Pro Cys Glu Ser Ser Pro Pro Glu Ser Ala Asp Thr
1370 1375 1380
Pro Thr Ser Thr Arg Arg Gln Pro Lys Thr Pro Leu Glu Lys Arg
1385 1390 1395
Asp Val Gln Lys Glu Leu Ser Ala Leu Lys Lys Leu Thr Gln Thr
1400 1405 1410
Ser Gly Glu Thr Thr His Thr Asp Lys Val Pro Gly Gly Glu Asp
1415 1420 1425
Lys Ser Ile Asn Ala Phe Arg Glu Thr Ala Lys Gln Lys Leu Asp
1430 1435 1440
Pro Ala Ala Ser Val Thr Gly Ser Lys Arg His Pro Lys Thr Lys
1445 1450 1455
Glu Lys Ala Gln Pro Leu Glu Asp Leu Ala Gly Trp Lys Glu Leu
1460 1465 1470
Phe Gln Thr Pro Val Cys Thr Asp Lys Pro Thr Thr His Glu Lys
1475 1480 1485
Thr Thr Lys Ile Ala Cys Arg Ser Gln Pro Asp Pro Val Asp Thr
1490 1495 1500
Pro Thr Ser Ser Lys Pro Gln Ser Lys Arg Ser Leu Arg Lys Val
1505 1510 1515
Asp Val Glu Glu Glu Phe Phe Ala Leu Arg Lys Arg Thr Pro Ser
1520 1525 1530
Ala Gly Lys Ala Met His Thr Pro Lys Pro Ala Val Ser Gly Glu
1535 1540 1545
Lys Asn Ile Tyr Ala Phe Met Gly Thr Pro Val Gln Lys Leu Asp
1550 1555 1560
Leu Thr Glu Asn Leu Thr Gly Ser Lys Arg Arg Leu Gln Thr Pro
1565 1570 1575
Lys Glu Lys Ala Gln Ala Leu Glu Asp Leu Ala Gly Phe Lys Glu
1580 1585 1590
Leu Phe Gln Thr Arg Gly His Thr Glu Glu Ser Met Thr Asn Asp
1595 1600 1605
Lys Thr Ala Lys Val Ala Cys Lys Ser Ser Gln Pro Asp Leu Asp
1610 1615 1620
Lys Asn Pro Ala Ser Ser Lys Arg Arg Leu Lys Thr Ser Leu Gly
1625 1630 1635
Lys Val Gly Val Lys Glu Glu Leu Leu Ala Val Gly Lys Leu Thr
1640 1645 1650
Gln Thr Ser Gly Glu Thr Thr His Thr His Thr Glu Pro Thr Gly
1655 1660 1665
Asp Gly Lys Ser Met Lys Ala Phe Met Glu Ser Pro Lys Gln Ile

1670 1675 1680
Leu Asp Ser Ala Ala Ser Leu Thr Gly Ser Lys Arg Gln Leu Arg
1685 1690 1695
Thr Pro Lys Gly Lys Ser Glu Val Pro Glu Asp Leu Ala Gly Phe
1700 1705 1710
Ile Glu Leu Phe Gln Thr Pro Ser His Thr Lys Glu Ser Met Thr
1715 1720 1725
Asn Glu Lys Thr Thr Lys Val Ser Tyr Arg Ala Ser Gln Pro Asp
1730 1735 1740
Leu Val Asp Thr Pro Thr Ser Ser Lys Pro Gln Pro Lys Arg Ser
1745 1750 1755
Leu Arg Lys Ala Asp Thr Glu Glu Glu Phe Leu Ala Phe Arg Lys
1760 1765 1770
Gln Thr Pro Ser Ala Gly Lys Ala Met His Thr Pro Lys Pro Ala
1775 1780 1785
Val Gly Glu Glu Lys Asp Ile Asn Thr Phe Leu Gly Thr Pro Val
1790 1795 1800
Gln Lys Leu Asp Gln Pro Gly Asn Leu Pro Gly Ser Asn Arg Arg
1805 1810 1815
Leu Gln Thr Arg Lys Glu Lys Ala Gln Ala Leu Glu Glu Leu Thr
1820 1825 1830
Gly Phe Arg Glu Leu Phe Gln Thr Pro Cys Thr Asp Asn Pro Thr
1835 1840 1845
Ala Asp Glu Lys Thr Thr Lys Lys Ile Leu Cys Lys Ser Pro Gln
1850 1855 1860
Ser Asp Pro Ala Asp Thr Pro Thr Asn Thr Lys Gln Arg Pro Lys
1865 1870 1875
Arg Ser Leu Lys Lys Ala Asp Val Glu Glu Glu Phe Leu Ala Phe
1880 1885 1890
Arg Lys Leu Thr Pro Ser Ala Gly Lys Ala Met His Thr Pro Lys
1895 1900 1905
Ala Ala Val Gly Glu Glu Lys Asp Ile Asn Thr Phe Val Gly Thr
1910 1915 1920
Pro Val Glu Lys Leu Asp Leu Leu Gly Asn Leu Pro Gly Ser Lys
1925 1930 1935
Arg Arg Pro Gln Thr Pro Lys Glu Lys Ala Lys Ala Leu Glu Asp
1940 1945 1950
Leu Ala Gly Phe Lys Glu Leu Phe Gln Thr Pro Gly His Thr Glu
1955 1960 1965
Glu Ser Met Thr Asp Asp Lys Ile Thr Glu Val Ser Cys Lys Ser
1970 1975 1980
Pro Gln Pro Asp Pro Val Lys Thr Pro Thr Ser Ser Lys Gln Arg
1985 1990 1995
Leu Lys Ile Ser Leu Gly Lys Val Gly Val Lys Glu Glu Val Leu
2000 2005 2010
Pro Val Gly Lys Leu Thr Gln Thr Ser Gly Lys Thr Thr Gln Thr
2015 2020 2025
His Arg Glu Thr Ala Gly Asp Gly Lys Ser Ile Lys Ala Phe Lys
2030 2035 2040
Glu Ser Ala Lys Gln Met Leu Asp Pro Ala Asn Tyr Gly Thr Gly
2045 2050 2055
Met Glu Arg Trp Pro Arg Thr Pro Lys Glu Glu Ala Gln Ser Leu
2060 2065 2070
Glu Asp Leu Ala Gly Phe Lys Glu Leu Phe Gln Thr Pro Asp His
2075 2080 2085
Thr Glu Glu Ser Thr Thr Asp Asp Lys Thr Thr Lys Ile Ala Cys
2090 2095 2100
Lys Ser Pro Pro Pro Glu Ser Met Asp Thr Pro Thr Ser Thr Arg
2105 2110 2115
Arg Arg Pro Lys Thr Pro Leu Gly Lys Arg Asp Ile Val Glu Glu
2120 2125 2130
Leu Ser Ala Leu Lys Gln Leu Thr Gln Thr Thr His Thr Asp Lys
2135 2140 2145
Val Pro Gly Asp Glu Asp Lys Gly Ile Asn Val Phe Arg Glu Thr
2150 2155 2160
Ala Lys Gln Lys Leu Asp Pro Ala Ala Ser Val Thr Gly Ser Lys
2165 2170 2175
Arg Gln Pro Arg Thr Pro Lys Gly Lys Ala Gln Pro Leu Glu Asp
2180 2185 2190

Leu Ala Gly Leu Lys Glu Leu Phe Gln Thr Pro Val Cys Thr Asp
2195 2200 2205
Lys Pro Thr Thr His Glu Lys Thr Thr Lys Ile Ala Cys Arg Ser
2210 2215 2220
Pro Gln Pro Asp Pro Val Gly Thr Pro Thr Ile Phe Lys Pro Gln
2225 2230 2235
Ser Lys Arg Ser Leu Arg Lys Ala Asp Val Glu Glu Glu Ser Leu
2240 2245 2250
Ala Leu Arg Lys Arg Thr Pro Ser Val Gly Lys Ala Met Asp Thr
2255 2260 2265
Pro Lys Pro Ala Gly Gly Asp Glu Lys Asp Met Lys Ala Phe Met
2270 2275 2280
Gly Thr Pro Val Gln Lys Leu Asp Leu Pro Gly Asn Leu Pro Gly
2285 2290 2295
Ser Lys Arg Trp Pro Gln Thr Pro Lys Glu Lys Ala Gln Ala Leu
2300 2305 2310
Glu Asp Leu Ala Gly Phe Lys Glu Leu Phe Gln Thr Pro Gly Thr
2315 2320 2325
Asp Lys Pro Thr Thr Asp Glu Lys Thr Thr Lys Ile Ala Cys Lys
2330 2335 2340
Ser Pro Gln Pro Asp Pro Val Asp Thr Pro Ala Ser Thr Lys Gln
2345 2350 2355
Arg Pro Lys Arg Asn Leu Arg Lys Ala Asp Val Glu Glu Glu Phe
2360 2365 2370
Leu Ala Leu Arg Lys Arg Thr Pro Ser Ala Gly Lys Ala Met Asp
2375 2380 2385
Thr Pro Lys Pro Ala Val Ser Asp Glu Lys Asn Ile Asn Thr Phe
2390 2395 2400
Val Glu Thr Pro Val Gln Lys Leu Asp Leu Leu Gly Asn Leu Pro
2405 2410 2415
Gly Ser Lys Arg Gln Pro Gln Thr Pro Lys Glu Lys Ala Glu Ala
2420 2425 2430
Leu Glu Asp Leu Val Gly Phe Lys Glu Leu Phe Gln Thr Pro Gly
2435 2440 2445
His Thr Glu Glu Ser Met Thr Asp Asp Lys Ile Thr Glu Val Ser
2450 2455 2460
Cys Lys Ser Pro Gln Pro Glu Ser Phe Lys Thr Ser Arg Ser Ser
2465 2470 2475
Lys Gln Arg Leu Lys Ile Pro Leu Val Lys Val Asp Met Lys Glu
2480 2485 2490
Glu Pro Leu Ala Val Ser Lys Leu Thr Arg Thr Ser Gly Glu Thr
2495 2500 2505
Thr Gln Thr His Thr Glu Pro Thr Gly Asp Ser Lys Ser Ile Lys
2510 2515 2520
Ala Phe Lys Glu Ser Pro Lys Gln Ile Leu Asp Pro Ala Ala Ser
2525 2530 2535
Val Thr Gly Ser Arg Arg Gln Leu Arg Thr Arg Lys Glu Lys Ala
2540 2545 2550
Arg Ala Leu Glu Asp Leu Val Asp Phe Lys Glu Leu Phe Ser Ala
2555 2560 2565
Pro Gly His Thr Glu Glu Ser Met Thr Ile Asp Lys Asn Thr Lys
2570 2575 2580
Ile Pro Cys Lys Ser Pro Pro Pro Glu Leu Thr Asp Thr Ala Thr
2585 2590 2595
Ser Thr Lys Arg Cys Pro Lys Thr Arg Pro Arg Lys Glu Val Lys
2600 2605 2610
Glu Glu Leu Ser Ala Val Glu Arg Leu Thr Gln Thr Ser Gly Gln
2615 2620 2625
Ser Thr His Thr His Lys Glu Pro Ala Ser Gly Asp Glu Gly Ile
2630 2635 2640
Lys Val Leu Lys Gln Arg Ala Lys Lys Lys Pro Asn Pro Val Glu
2645 2650 2655
Glu Glu Pro Ser Arg Arg Arg Pro Arg Ala Pro Lys Glu Lys Ala
2660 2665 2670
Gln Pro Leu Glu Asp Leu Ala Gly Phe Thr Glu Leu Ser Glu Thr
2675 2680 2685
Ser Gly His Thr Gln Glu Ser Leu Thr Ala Gly Lys Ala Thr Lys
2690 2695 2700
Ile Pro Cys Glu Ser Pro Pro Leu Glu Val Val Asp Thr Thr Ala

2705 2710 2715
Ser Thr Lys Arg His Leu Arg Thr Arg Val Gln Lys Val Gln Val
2720 2725 2730
Lys Glu Glu Pro Ser Ala Val Lys Phe Thr Gln Thr Ser Gly Glu
2735 2740 2745
Thr Thr Asp Ala Asp Lys Glu Pro Ala Gly Glu Asp Lys Gly Ile
2750 2755 2760
Lys Ala Leu Lys Glu Ser Ala Lys Gln Thr Pro Ala Pro Ala Ala
2765 2770 2775
Ser Val Thr Gly Ser Arg Arg Arg Pro Arg Ala Pro Arg Glu Ser
2780 2785 2790
Ala Gln Ala Ile Glu Asp Leu Ala Gly Phe Lys Asp Pro Ala Ala
2795 2800 2805
Gly His Thr Glu Glu Ser Met Thr Asp Asp Lys Thr Thr Lys Ile
2810 2815 2820
Pro Cys Lys Ser Ser Pro Glu Leu Glu Asp Thr Ala Thr Ser Ser
2825 2830 2835
Lys Arg Arg Pro Arg Thr Arg Ala Gln Lys Val Glu Val Lys Glu
2840 2845 2850
Glu Leu Leu Ala Val Gly Lys Leu Thr Gln Thr Ser Gly Glu Thr
2855 2860 2865
Thr His Thr Asp Lys Glu Pro Val Gly Glu Gly Lys Gly Thr Lys
2870 2875 2880
Ala Phe Lys Gln Pro Ala Lys Arg Asn Val Asp Ala Glu Asp Val
2885 2890 2895
Ile Gly Ser Arg Arg Gln Pro Arg Ala Pro Lys Glu Lys Ala Gln
2900 2905 2910
Pro Leu Glu Asp Leu Ala Ser Phe Gln Glu Leu Ser Gln Thr Pro
2915 2920 2925
Gly His Thr Glu Glu Leu Ala Asn Gly Ala Ala Asp Ser Phe Thr
2930 2935 2940
Ser Ala Pro Lys Gln Thr Pro Asp Ser Gly Lys Pro Leu Lys Ile
2945 2950 2955
Ser Arg Arg Val Leu Arg Ala Pro Lys Val Glu Pro Val Gly Asp
2960 2965 2970
Val Val Ser Thr Arg Asp Pro Val Lys Ser Gln Ser Lys Ser Asn
2975 2980 2985
Thr Ser Leu Pro Pro Leu Pro Phe Lys Arg Gly Gly Gly Lys Asp
2990 2995 3000
Gly Ser Val Thr Gly Thr Lys Arg Leu Arg Cys Met Pro Ala Pro
3005 3010 3015
Glu Glu Ile Val Glu Glu Leu Pro Ala Ser Lys Lys Gln Arg Val
3020 3025 3030
Ala Pro Arg Ala Arg Gly Lys Ser Ser Glu Pro Val Val Ile Met
3035 3040 3045
Lys Arg Ser Leu Arg Thr Ser Ala Lys Arg Ile Glu Pro Ala Glu
3050 3055 3060
Glu Leu Asn Ser Asn Asp Met Lys Thr Asn Lys Glu Glu His Lys
3065 3070 3075
Leu Gln Asp Ser Val Pro Glu Asn Lys Gly Ile Ser Leu Arg Ser
3080 3085 3090
Arg Arg Gln Asp Lys Thr Glu Ala Glu Gln Gln Ile Thr Glu Val
3095 3100 3105
Phe Val Leu Ala Glu Arg Ile Glu Ile Asn Arg Asn Glu Lys Lys
3110 3115 3120
Pro Met Lys Thr Ser Pro Glu Met Asp Ile Gln Asn Pro Asp Asp
3125 3130 3135
Gly Ala Arg Lys Pro Ile Pro Arg Asp Lys Val Thr Glu Asn Lys
3140 3145 3150
Arg Cys Leu Arg Ser Ala Arg Gln Asn Glu Ser Ser Gln Pro Lys
3155 3160 3165
Val Ala Glu Glu Ser Gly Gly Gln Lys Ser Ala Lys Val Leu Met
3170 3175 3180
Gln Asn Gln Lys Gly Lys Gly Glu Ala Gly Asn Ser Asp Ser Met
3185 3190 3195
Cys Leu Arg Ser Arg Lys Thr Lys Ser Gln Pro Ala Ala Ser Thr
3200 3205 3210
Leu Glu Ser Lys Ser Val Gln Arg Val Thr Arg Ser Val Lys Arg
3215 3220 3225

```
Cys Ala  Glu Asn Pro Lys Lys  Ala Glu Asp Asn Val  Cys Val Lys
    3230                 3235                 3240
Lys Ile  Thr Thr Arg Ser His  Arg Asp Ser Glu Asp  Ile
    3245                 3250                 3255
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<210> 258
<211> 160
<212> PRT
<213> Homo sapiens
<400> 258

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Met Ser Glu Val Arg Pro Leu Ser Arg Asp Ile Leu Met Glu Thr Leu
1               5                  10                  15
Leu Tyr Glu Gln Leu Leu Glu Pro Pro Thr Met Glu Val Leu Gly Met
            20                  25                  30
Thr Asp Ser Glu Glu Asp Leu Asp Pro Met Glu Asp Phe Asp Ser Leu
        35                  40                  45
Glu Cys Met Glu Gly Ser Asp Ala Leu Ala Leu Arg Leu Ala Cys Ile
    50                  55                  60
Gly Asp Glu Met Asp Val Ser Leu Arg Ala Pro Arg Leu Ala Gln Leu
65                  70                  75                  80
Ser Glu Val Ala Met His Ser Leu Gly Leu Ala Phe Ile Tyr Asp Gln
                85                  90                  95
Thr Glu Asp Ile Arg Asp Val Leu Arg Ser Phe Met Asp Gly Phe Thr
            100                 105                 110
Thr Leu Lys Glu Asn Ile Met Arg Phe Trp Arg Ser Pro Asn Pro Gly
        115                 120                 125
Ser Trp Val Ser Cys Glu Gln Val Leu Leu Ala Leu Leu Leu Leu Leu
    130                 135                 140
Ala Leu Leu Leu Pro Leu Leu Ser Gly Gly Leu His Leu Leu Leu Lys
145                 150                 155                 160
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<210> 259
<211> 1844
<212> PRT
<213> Homo sapiens
<400> 259

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Met Thr Thr Arg Phe Thr Asp Glu Leu Met Glu Gln Gly Leu Thr Tyr
1               5                  10                  15
Lys Val Leu Thr Leu Val Ser Gln Ile Asp Val Asn Asn Glu Phe Glu
            20                  25                  30
Lys Leu Gln Arg Glu Arg Gly Leu Gly Ser Glu Lys His Arg Lys Glu
        35                  40                  45
Val Ser Asp Leu Ile Lys Glu Cys Arg Gln Ser Leu Ala Glu Ser Leu
    50                  55                  60
Phe Ala Trp Ala Cys Gln Ser Pro Leu Gly Lys Glu Asp Thr Leu Leu
65                  70                  75                  80
Leu Ile Gly His Leu Glu Arg Val Thr Val Glu Ala Asn Gly Ser Leu
                85                  90                  95
Asp Ala Val Asn Leu Ala Leu Leu Met Ala Leu Leu Tyr Cys Phe Asp
            100                 105                 110
Ile Ser Phe Ile Glu Gln Ser Thr Glu Glu Arg Asp Asp Met Ile His
        115                 120                 125
Gln Leu Pro Leu Leu Thr Glu Lys Gln Tyr Ile Ala Thr Ile His Ser
    130                 135                 140
Arg Leu Gln Asp Ser Gln Leu Trp Lys Leu Pro Gly Leu Gln Ala Thr
145                 150                 155                 160
Val Arg Leu Ala Trp Ala Leu Ala Leu Arg Gly Ile Ser Gln Leu Pro
                165                 170                 175
Asp Val Thr Ala Leu Ala Glu Phe Thr Glu Ala Asp Glu Ala Met Ala
            180                 185                 190
Glu Leu Ala Ile Ala Asp Asn Val Phe Leu Phe Leu Met Glu Ser Val
        195                 200                 205
Val Val Ser Glu Tyr Phe Tyr Gln Glu Glu Phe Tyr Ile Arg Arg Val
    210                 215                 220
His Asn Leu Ile Thr Asp Phe Leu Ala Leu Met Pro Met Lys Val Lys
225                 230                 235                 240
Gln Leu Arg Asn Arg Ala Asp Glu Asp Ala Arg Met Ile His Met Ser
                245                 250                 255
Met Gln Met Gly Asn Glu Pro Pro Ile Ser Leu Arg Arg Asp Leu Glu
```

```
                260                 265                 270
His Leu Met Leu Leu Ile Gly Glu Leu Tyr Lys Lys Asn Pro Phe His
        275                 280                 285
Leu Glu Leu Ala Leu Glu Tyr Trp Cys Pro Thr Glu Pro Leu Gln Thr
    290                 295                 300
Pro Thr Ile Met Gly Ser Tyr Leu Gly Val Ala His Gln Arg Pro Pro
305                 310                 315                 320
Gln Arg Gln Val Val Leu Ser Lys Phe Val Arg Gln Met Gly Asp Leu
                325                 330                 335
Leu Pro Pro Thr Ile Tyr Ile Pro Tyr Leu Lys Met Leu Gln Gly Leu
            340                 345                 350
Ala Asn Gly Pro Gln Cys Ala His Tyr Cys Phe Ser Leu Leu Lys Val
        355                 360                 365
Asn Gly Ser Ser His Val Glu Asn Ile Gln Gly Ala Gly Gly Ser Pro
    370                 375                 380
Val Ser Trp Glu His Phe Phe His Ser Leu Met Leu Tyr His Glu His
385                 390                 395                 400
Leu Arg Lys Asp Leu Pro Ser Ala Asp Ser Val Gln Tyr Arg His Leu
                405                 410                 415
Pro Ser Arg Gly Ile Thr Gln Lys Glu Gln Asp Gly Leu Ile Ala Phe
            420                 425                 430
Leu Gln Leu Thr Ser Thr Ile Ile Thr Trp Ser Glu Asn Ala Arg Leu
        435                 440                 445
Ala Leu Cys Glu His Pro Gln Trp Thr Pro Val Val Val Ile Leu Gly
    450                 455                 460
Leu Leu Gln Cys Ser Ile Pro Pro Val Leu Lys Ala Glu Leu Leu Lys
465                 470                 475                 480
Thr Leu Ala Ala Phe Gly Lys Ser Pro Glu Ile Ala Ala Ser Leu Trp
                485                 490                 495
Gln Ser Leu Glu Tyr Thr Gln Ile Leu Gln Thr Val Arg Ile Pro Ser
            500                 505                 510
Gln Arg Gln Ala Ile Gly Ile Glu Val Glu Leu Asn Glu Ile Glu Ser
        515                 520                 525
Arg Cys Glu Glu Tyr Pro Leu Thr Arg Ala Phe Cys Gln Leu Ile Ser
    530                 535                 540
Thr Leu Val Glu Ser Ser Phe Pro Ser Asn Leu Gly Ala Gly Leu Arg
545                 550                 555                 560
Pro Pro Gly Phe Asp Pro Tyr Leu Gln Phe Leu Arg Asp Ser Val Phe
                565                 570                 575
Leu Arg Phe Arg Thr Arg Ala Tyr Arg Arg Ala Ala Glu Lys Trp Glu
            580                 585                 590
Val Ala Glu Val Val Leu Glu Val Phe Tyr Lys Leu Leu Arg Asp Tyr
        595                 600                 605
Glu Pro Gln Leu Glu Asp Phe Val Asp Gln Phe Val Glu Leu Gln Gly
    610                 615                 620
Glu Glu Ile Ile Ala Tyr Lys Pro Pro Gly Phe Ser Leu Met Tyr His
625                 630                 635                 640
Leu Leu Asn Glu Ser Pro Met Leu Glu Leu Ala Leu Ser Leu Leu Glu
                645                 650                 655
Glu Gly Val Lys Gln Leu Asp Thr Tyr Ala Pro Phe Pro Gly Lys Lys
            660                 665                 670
His Leu Glu Lys Ala Val Gln His Cys Leu Ala Leu Leu Asn Leu Thr
        675                 680                 685
Leu Gln Lys Glu Asn Leu Phe Met Asp Leu Leu Arg Glu Ser Gln Leu
    690                 695                 700
Ala Leu Ile Val Cys Pro Leu Glu Gln Leu Leu Gln Gly Ile Asn Pro
705                 710                 715                 720
Arg Thr Lys Lys Ala Asp Asn Val Val Asn Ile Ala Arg Tyr Leu Tyr
                725                 730                 735
His Gly Asn Thr Asn Pro Glu Leu Ala Phe Glu Ser Ala Lys Ile Leu
            740                 745                 750
Cys Cys Ile Ser Cys Asn Ser Asn Ile Gln Ile Lys Leu Val Gly Asp
        755                 760                 765
Phe Thr His Asp Gln Ser Ile Ser Gln Lys Leu Met Ala Gly Phe Val
    770                 775                 780
Glu Cys Leu Asp Cys Glu Asp Ala Glu Glu Phe Val Arg Leu Glu Glu
785                 790                 795                 800
Gly Ser Glu Leu Glu Lys Lys Leu Val Ala Ile Arg His Glu Thr Arg
                805                 810                 815
```

Ile His Ile Leu Asn Leu Leu Ile Thr Ser Leu Glu Cys Asn Pro Pro
820 825 830
Asn Leu Ala Leu Tyr Leu Leu Gly Phe Glu Leu Lys Lys Pro Val Ser
835 840 845
Thr Thr Asn Leu Gln Asp Pro Gly Val Leu Gly Cys Pro Arg Thr Cys
850 855 860
Leu His Ala Ile Leu Asn Ile Leu Glu Lys Gly Thr Glu Gly Arg Thr
865 870 875 880
Gly Pro Val Ala Val Arg Glu Ser Pro Gln Leu Ala Glu Leu Cys Tyr
885 890 895
Gln Val Ile Tyr Gln Leu Cys Ala Cys Ser Asp Thr Ser Gly Pro Thr
900 905 910
Met Arg Tyr Leu Arg Thr Ser Gln Asp Phe Leu Phe Ser Gln Leu Gln
915 920 925
Tyr Leu Pro Phe Ser Asn Lys Glu Tyr Glu Ile Ser Met Leu Asn Gln
930 935 940
Met Ser Trp Leu Met Lys Thr Ala Ser Ile Glu Leu Arg Val Thr Ser
945 950 955 960
Leu Asn Arg Gln Arg Ser His Thr Gln Arg Leu Leu His Leu Leu Leu
965 970 975
Asp Asp Met Pro Val Lys Pro Tyr Ser Asp Gly Glu Gly Gly Ile Glu
980 985 990
Asp Glu Asn Arg Ser Val Ser Gly Phe Leu His Phe Asp Thr Ala Thr
995 1000 1005
Lys Val Arg Arg Lys Ile Leu Asn Ile Leu Asp Ser Ile Asp Phe
1010 1015 1020
Ser Gln Glu Ile Pro Glu Pro Leu Gln Leu Asp Phe Phe Asp Arg
1025 1030 1035
Ala Gln Ile Glu Gln Val Ile Ala Asn Cys Glu His Lys Asn Leu
1040 1045 1050
Arg Gly Gln Thr Val Cys Asn Val Lys Leu Leu His Arg Val Leu
1055 1060 1065
Val Ala Glu Val Asn Ala Leu Gln Gly Met Ala Ala Ile Gly Gln
1070 1075 1080
Arg Pro Leu Leu Met Glu Glu Ile Ser Thr Val Leu Gln Tyr Val
1085 1090 1095
Val Gly Arg Asn Lys Leu Leu Gln Cys Leu His Ala Lys Arg His
1100 1105 1110
Ala Leu Glu Ser Trp Arg Gln Leu Val Glu Ile Ile Leu Thr Ala
1115 1120 1125
Cys Pro Gln Asp Leu Ile Gln Ala Glu Asp Arg Gln Leu Ile Ile
1130 1135 1140
Arg Asp Ile Leu Gln Asp Val His Asp Lys Ile Leu Asp Asp Glu
1145 1150 1155
Ala Ala Gln Glu Leu Met Pro Val Val Ala Gly Ala Val Phe Thr
1160 1165 1170
Leu Thr Ala His Leu Ser Gln Ala Val Leu Thr Glu Gln Lys Glu
1175 1180 1185
Thr Ser Val Leu Gly Pro Ala Glu Ala His Tyr Ala Phe Met Leu
1190 1195 1200
Asp Ser Cys Phe Thr Ser Pro Pro Pro Glu Glu Asn Pro Leu Val
1205 1210 1215
Gly Phe Ala Ser Ile Gly Asp Ser Ser Leu Tyr Ile Ile Leu Lys
1220 1225 1230
Lys Leu Leu Asp Phe Ile Leu Lys Thr Gly Gly Gly Phe Gln Arg
1235 1240 1245
Val Arg Thr His Leu Tyr Gly Ser Leu Leu Tyr Tyr Leu Gln Ile
1250 1255 1260
Ala Gln Arg Pro Asp Glu Pro Asp Thr Leu Glu Ala Ala Lys Lys
1265 1270 1275
Thr Met Trp Glu Arg Leu Thr Ala Pro Glu Asp Val Phe Ser Lys
1280 1285 1290
Leu Gln Arg Glu Asn Ile Ala Ile Ile Glu Ser Tyr Gly Ala Ala
1295 1300 1305
Leu Met Glu Val Val Cys Arg Asp Ala Cys Asp Gly His Glu Ile
1310 1315 1320
Gly Arg Met Leu Ala Leu Ala Leu Leu Asp Arg Ile Val Ser Val
1325 1330 1335
Asp Lys Gln Gln Gln Trp Leu Leu Tyr Leu Ser Asn Ser Gly Tyr

1340 1345 1350
Leu Lys Val Leu Val Asp Ser Leu Val Glu Asp Asp Arg Thr Leu
1355 1360 1365
Gln Ser Leu Leu Thr Pro Gln Pro Pro Leu Leu Lys Ala Leu Tyr
1370 1375 1380
Thr Tyr Glu Ser Lys Met Ala Phe Leu Thr Arg Val Ala Lys Ile
1385 1390 1395
Gln Gln Gly Ala Leu Glu Leu Leu Arg Ser Gly Val Ile Val Arg
1400 1405 1410
Leu Ala Gln Cys Gln Val Tyr Asp Met Arg Pro Glu Thr Asp Pro
1415 1420 1425
Gln Ser Met Phe Gly Met Arg Asp Pro Pro Met Phe Ile Pro Thr
1430 1435 1440
Pro Val Asp Arg Tyr Arg Gln Ile Leu Leu Pro Ala Leu Gln Leu
1445 1450 1455
Cys Gln Val Ile Leu Thr Ser Ser Met Ala Gln His Leu Gln Ala
1460 1465 1470
Ala Gly Gln Val Leu Gln Phe Leu Ile Ser His Ser Asp Thr Ile
1475 1480 1485
Gln Ala Ile Leu Arg Cys Gln Asp Val Ser Ala Gly Ser Leu Gln
1490 1495 1500
Glu Leu Ala Leu Leu Thr Gly Ile Ile Ser Lys Ala Ala Leu Pro
1505 1510 1515
Gly Ile Leu Ser Glu Leu Asp Val Asp Val Asn Glu Gly Ser Leu
1520 1525 1530
Met Glu Leu Gln Gly His Ile Gly Arg Phe Gln Arg Gln Cys Leu
1535 1540 1545
Gly Leu Leu Ser Arg Phe Gly Gly Ser Asp Arg Leu Arg Gln Phe
1550 1555 1560
Lys Phe Gln Asp Asp Asn Val Glu Gly Asp Lys Val Ser Lys Lys
1565 1570 1575
Asp Glu Ile Glu Leu Ala Met Gln Gln Ile Cys Ala Asn Val Met
1580 1585 1590
Glu Tyr Cys Gln Ser Leu Met Leu Gln Ser Ser Pro Thr Phe Gln
1595 1600 1605
His Ala Val Cys Leu Phe Thr Pro Ser Leu Ser Glu Thr Val Asn
1610 1615 1620
Arg Asp Gly Pro Arg Gln Asp Thr Gln Ala Pro Val Val Pro Tyr
1625 1630 1635
Trp Arg Leu Pro Gly Leu Gly Ile Ile Ile Tyr Leu Leu Lys Gln
1640 1645 1650
Ser Ala Asn Asp Phe Phe Ser Tyr Tyr Asp Ser His Arg Gln Ser
1655 1660 1665
Val Ser Lys Leu Gln Asn Val Glu Gln Leu Pro Pro Asp Glu Ile
1670 1675 1680
Lys Glu Leu Cys Gln Ser Val Met Pro Ala Gly Val Asp Lys Ile
1685 1690 1695
Ser Thr Ala Gln Lys Tyr Val Leu Ala Arg Arg Arg Leu Val Lys
1700 1705 1710
Val Ile Asn Asn Arg Ala Lys Leu Leu Ser Leu Cys Ser Phe Ile
1715 1720 1725
Ile Glu Thr Cys Leu Phe Ile Leu Trp Arg His Leu Glu Tyr Tyr
1730 1735 1740
Leu Leu His Cys Met Pro Thr Asp Ser Gln Asp Ser Leu Phe Ala
1745 1750 1755
Ser Arg Thr Leu Phe Lys Ser Arg Arg Leu Gln Asp Ser Phe Ala
1760 1765 1770
Ser Glu Thr Asn Leu Asp Phe Arg Ser Gly Leu Ala Ile Val Ser
1775 1780 1785
Gln His Asp Leu Asp Gln Leu Gln Ala Asp Ala Ile Asn Ala Phe
1790 1795 1800
Gly Glu Ser Leu Gln Lys Lys Leu Leu Asp Ile Glu Gly Leu Tyr
1805 1810 1815
Ser Lys Val Arg Ser Arg Tyr Ser Phe Ile Gln Ala Leu Val Arg
1820 1825 1830
Arg Ile Arg Gly Leu Leu Arg Ile Ser Arg Asn
1835 1840

<210> 260

<211> 1299
<212> PRT
<213> Homo sapiens
<400> 260

```
Met Ala Ala Glu Thr Gln Thr Leu Asn Phe Gly Pro Glu Trp Leu Arg
1               5                  10                  15
Ala Leu Ser Ser Gly Gly Ser Ile Thr Ser Pro Pro Leu Ser Pro Ala
            20                  25                  30
Leu Pro Lys Tyr Lys Leu Ala Asp Tyr Arg Tyr Gly Arg Glu Glu Met
        35                  40                  45
Leu Ala Leu Phe Leu Lys Asp Asn Lys Ile Pro Ser Asp Leu Leu Asp
    50                  55                  60
Lys Glu Phe Leu Pro Ile Leu Gln Glu Glu Pro Leu Pro Pro Leu Ala
65                  70                  75                  80
Leu Val Pro Phe Thr Glu Glu Glu Gln Arg Asn Phe Ser Met Ser Val
                85                  90                  95
Asn Ser Ala Ala Val Leu Arg Leu Thr Gly Arg Gly Gly Gly Gly Thr
            100                 105                 110
Val Val Gly Ala Pro Arg Gly Arg Ser Ser Ser Arg Gly Arg Gly Arg
        115                 120                 125
Gly Arg Gly Glu Cys Gly Phe Tyr Gln Arg Ser Phe Asp Glu Val Glu
    130                 135                 140
Gly Val Phe Gly Arg Gly Gly Gly Arg Glu Met His Arg Ser Gln Ser
145                 150                 155                 160
Trp Glu Glu Arg Gly Asp Arg Arg Phe Glu Lys Pro Gly Arg Lys Asp
                165                 170                 175
Val Gly Arg Pro Asn Phe Glu Glu Gly Gly Pro Thr Ser Val Gly Arg
            180                 185                 190
Lys His Glu Phe Ile Arg Ser Glu Ser Glu Asn Trp Arg Ile Phe Arg
        195                 200                 205
Glu Glu Gln Asn Gly Glu Asp Glu Asp Gly Gly Trp Arg Leu Ala Gly
    210                 215                 220
Ser Arg Arg Asp Gly Glu Arg Trp Arg Pro His Ser Pro Asp Gly Pro
225                 230                 235                 240
Arg Ser Ala Gly Trp Arg Glu His Met Glu Arg Arg Arg Arg Phe Glu
                245                 250                 255
Phe Asp Phe Arg Asp Arg Asp Asp Glu Arg Gly Tyr Arg Arg Val Arg
            260                 265                 270
Ser Gly Ser Gly Ser Ile Asp Asp Asp Arg Asp Ser Leu Pro Glu Trp
        275                 280                 285
Cys Leu Glu Asp Ala Glu Glu Glu Met Gly Thr Phe Asp Ser Ser Gly
    290                 295                 300
Ala Phe Leu Ser Leu Lys Lys Val Gln Lys Glu Pro Ile Pro Glu Glu
305                 310                 315                 320
Gln Glu Met Asp Phe Arg Pro Val Asp Glu Gly Glu Glu Cys Ser Asp
                325                 330                 335
Ser Glu Gly Ser His Asn Glu Glu Ala Lys Glu Pro Asp Lys Thr Asn
            340                 345                 350
Lys Lys Glu Gly Glu Lys Thr Asp Arg Val Gly Val Glu Ala Ser Glu
        355                 360                 365
Glu Thr Pro Gln Thr Ser Ser Ser Ser Ala Arg Pro Gly Thr Pro Ser
    370                 375                 380
Asp His Gln Ser Gln Glu Ala Ser Gln Phe Glu Arg Lys Asp Glu Pro
385                 390                 395                 400
Lys Thr Glu Gln Thr Glu Lys Ala Glu Glu Glu Thr Arg Met Glu Asn
                405                 410                 415
Ser Leu Pro Ala Lys Val Pro Ser Arg Gly Asp Glu Met Val Ala Asp
            420                 425                 430
Val Gln Gln Pro Leu Ser Gln Ile Pro Ser Asp Thr Ala Ser Pro Leu
        435                 440                 445
Leu Ile Leu Pro Pro Pro Val Pro Asn Pro Ser Pro Thr Leu Arg Pro
    450                 455                 460
Val Glu Thr Pro Val Val Gly Ala Pro Gly Met Gly Ser Val Ser Thr
465                 470                 475                 480
Glu Pro Asp Asp Glu Glu Gly Leu Lys His Leu Glu Gln Gln Ala Glu
                485                 490                 495
Lys Met Val Ala Tyr Leu Gln Asp Ser Ala Leu Asp Asp Glu Arg Leu
            500                 505                 510
Ala Ser Lys Leu Gln Glu His Arg Ala Lys Gly Val Ser Ile Pro Leu
```

```
        515                 520                 525
Met His Glu Ala Met Gln Lys Trp Tyr Tyr Lys Asp Pro Gln Gly Glu
    530                 535                 540
Ile Gln Gly Pro Phe Asn Asn Gln Glu Met Ala Glu Trp Phe Gln Ala
545                 550                 555                 560
Gly Tyr Phe Thr Met Ser Leu Leu Val Lys Arg Ala Cys Asp Glu Ser
                565                 570                 575
Phe Gln Pro Leu Gly Asp Ile Met Lys Met Trp Gly Arg Val Pro Phe
            580                 585                 590
Ser Pro Gly Pro Ala Pro Pro Pro His Met Gly Glu Leu Asp Gln Glu
        595                 600                 605
Arg Leu Thr Arg Gln Gln Glu Leu Thr Ala Leu Tyr Gln Met Gln His
    610                 615                 620
Leu Gln Tyr Gln Gln Phe Leu Ile Gln Gln Gln Tyr Ala Gln Val Leu
625                 630                 635                 640
Ala Gln Gln Gln Lys Ala Ala Leu Ser Ser Gln Gln Gln Gln Gln Leu
                645                 650                 655
Ala Leu Leu Leu Gln Gln Phe Gln Thr Leu Lys Met Arg Ile Ser Asp
            660                 665                 670
Gln Asn Ile Ile Pro Ser Val Thr Arg Ser Val Ser Val Pro Asp Thr
        675                 680                 685
Gly Ser Ile Trp Glu Leu Gln Pro Thr Ala Ser Gln Pro Thr Val Trp
    690                 695                 700
Glu Gly Gly Ser Val Trp Asp Leu Pro Leu Asp Thr Thr Thr Pro Gly
705                 710                 715                 720
Pro Ala Leu Glu Gln Leu Gln Gln Leu Glu Lys Ala Lys Ala Ala Lys
                725                 730                 735
Leu Glu Gln Glu Arg Arg Glu Ala Glu Met Arg Ala Lys Arg Glu Glu
            740                 745                 750
Glu Glu Arg Lys Arg Gln Glu Glu Leu Arg Arg Gln Gln Glu Glu Ile
        755                 760                 765
Leu Arg Arg Gln Gln Glu Glu Glu Arg Lys Arg Arg Glu Glu Glu Glu
    770                 775                 780
Leu Ala Arg Arg Lys Gln Glu Gly Ala Leu Arg Arg Gln Arg Glu Gln
785                 790                 795                 800
Glu Ile Ala Leu Arg Arg Gln Arg Glu Glu Glu Glu Arg Gln Gln Gln
                805                 810                 815
Glu Glu Ala Leu Arg Arg Leu Glu Glu Arg Arg Arg Glu Glu Glu Glu
            820                 825                 830
Arg Arg Lys Gln Glu Glu Leu Leu Arg Lys Gln Glu Glu Glu Ala Ala
        835                 840                 845
Lys Trp Ala Arg Glu Glu Glu Glu Ala Gln Arg Arg Leu Glu Glu Asn
    850                 855                 860
Arg Leu Arg Met Glu Glu Glu Ala Ala Arg Leu Arg His Glu Glu Glu
865                 870                 875                 880
Glu Arg Lys Arg Lys Glu Leu Glu Val Gln Arg Gln Lys Glu Leu Met
                885                 890                 895
Arg Gln Arg Gln Gln Gln Gln Glu Ala Leu Arg Arg Leu Gln Gln Gln
            900                 905                 910
Gln Gln Gln Gln Gln Leu Ala Gln Met Lys Leu Pro Ser Ser Ser Thr
        915                 920                 925
Trp Gly Gln Gln Ser Asn Thr Thr Ala Cys Gln Ser Gln Ala Thr Leu
    930                 935                 940
Ser Leu Ala Glu Ile Gln Lys Leu Glu Glu Glu Arg Glu Arg Gln Leu
945                 950                 955                 960
Arg Glu Glu Gln Arg Arg Gln Gln Arg Glu Leu Met Lys Ala Leu Gln
                965                 970                 975
Gln Gln Gln Gln Gln Gln Gln Gln Lys Leu Ser Gly Trp Gly Asn Val
            980                 985                 990
Ser Lys Pro Ser Gly Thr Thr Lys  Ser Leu Leu Glu Ile  Gln Gln Glu
        995                 1000                1005
Glu Ala  Arg Gln Met Gln Lys  Gln Gln Gln Gln Gln  Gln Gln His
    1010                1015                1020
Gln Gln  Pro Asn Arg Ala Arg  Asn Asn Thr His Ser  Asn Leu His
    1025                1030                1035
Thr Ser  Ile Gly Asn Ser Val  Trp Gly Ser Ile Asn  Thr Gly Pro
    1040                1045                1050
Pro Asn  Gln Trp Ala Ser Asp  Leu Val Ser Ser Ile  Trp Ser Asn
    1055                1060                1065
```

```
Ala Asp Thr Lys Asn Ser Asn Met Gly Phe Trp Asp Asp Ala Val
    1070                1075                1080
Lys Glu Val Gly Pro Arg Asn Ser Thr Asn Lys Asn Lys Asn Asn
    1085                1090                1095
Ala Ser Leu Ser Lys Ser Val Gly Val Ser Asn Arg Gln Asn Lys
    1100                1105                1110
Lys Val Glu Glu Glu Glu Lys Leu Leu Lys Leu Phe Gln Gly Val
    1115                1120                1125
Asn Lys Ala Gln Asp Gly Phe Thr Gln Trp Cys Glu Gln Met Leu
    1130                1135                1140
His Ala Leu Asn Thr Ala Asn Asn Leu Gly Val Pro Thr Phe Val
    1145                1150                1155
Ser Phe Leu Lys Glu Val Glu Ser Pro Tyr Glu Val His Asp Tyr
    1160                1165                1170
Ile Arg Ala Tyr Leu Gly Asp Thr Ser Glu Ala Lys Glu Phe Ala
    1175                1180                1185
Lys Gln Phe Leu Glu Arg Arg Ala Lys Gln Lys Ala Asn Gln Gln
    1190                1195                1200
Arg Gln Gln Gln Gln Leu Pro Gln Gln Gln Gln Gln Gln Pro Pro
    1205                1210                1215
Gln Gln Pro Pro Gln Gln Pro Gln Gln Gln Asp Ser Val Trp Gly
    1220                1225                1230
Met Asn His Ser Thr Leu His Ser Val Phe Gln Thr Asn Gln Ser
    1235                1240                1245
Asn Asn Gln Gln Ser Asn Phe Glu Ala Val Gln Ser Gly Lys Lys
    1250                1255                1260
Lys Lys Lys Gln Lys Met Val Arg Ala Asp Pro Ser Leu Leu Gly
    1265                1270                1275
Phe Ser Val Asn Ala Ser Ser Glu Arg Leu Asn Met Gly Glu Ile
    1280                1285                1290
Glu Thr Leu Asp Asp Tyr
    1295
```

<210> 261
<211> 107
<212> PRT
<213> Homo sapiens
<400> 261

```
Met Ser Gly Cys Arg Val Phe Ile Gly Arg Leu Asn Pro Ala Ala Arg
1               5                  10                  15
Glu Lys Asp Val Glu Arg Phe Phe Lys Gly Tyr Gly Arg Ile Arg Asp
            20                  25                  30
Ile Asp Leu Lys Arg Gly Phe Gly Phe Val Glu Phe Glu Asp Pro Arg
        35                  40                  45
Asp Ala Asp Asp Ala Val Tyr Glu Leu Asp Gly Lys Glu Leu Cys Ser
    50                  55                  60
Glu Arg Val Thr Ile Glu His Ala Arg Ala Arg Ser Arg Gly Gly Arg
65                  70                  75                  80
Gly Arg Gly Arg Tyr Ser Asp Arg Phe Ser Ser Arg Arg Pro Arg Asn
                85                  90                  95
Asp Arg Arg Tyr Val Lys Gly Gly Trp Leu His
            100                 105
```

<210> 262
<211> 184
<212> PRT
<213> Homo sapiens
<400> 262

```
Met Val Arg Tyr Ser Leu Asp Pro Glu Asn Pro Thr Lys Ser Cys Lys
1               5                  10                  15
Ser Arg Gly Ser Asn Leu Arg Val His Phe Lys Asn Thr Arg Glu Thr
            20                  25                  30
Ala Gln Ala Ile Lys Gly Met His Ile Arg Lys Ala Thr Lys Tyr Leu
        35                  40                  45
Lys Asp Val Thr Leu Gln Lys Gln Cys Val Pro Phe Arg Arg Tyr Asn
    50                  55                  60
Gly Gly Val Gly Arg Cys Ala Gln Ala Lys Gln Trp Gly Trp Thr Gln
65                  70                  75                  80
Gly Arg Trp Pro Lys Lys Ser Ala Glu Phe Leu Leu His Met Leu Lys
```

```
                85                  90                  95
Asn Ala Glu Ser Asn Ala Glu Leu Lys Gly Leu Asp Val Asp Ser Leu
            100                 105                 110
Val Ile Glu His Ile Gln Val Asn Lys Ala Pro Lys Met Arg Arg Arg
        115                 120                 125
Thr Tyr Arg Ala His Gly Arg Ile Asn Pro Tyr Met Ser Ser Pro Cys
    130                 135                 140
His Ile Glu Met Ile Leu Thr Glu Lys Glu Gln Ile Val Pro Lys Pro
145                 150                 155                 160
Glu Glu Glu Val Ala Gln Lys Lys Lys Ile Ser Gln Lys Lys Leu Lys
                165                 170                 175
Lys Gln Lys Leu Met Ala Arg Glu
            180
```

<210> 263
<211> 72
<212> PRT
<213> Homo sapiens
<400> 263

```
Met Ser Ser Lys Thr Ala Ser Thr Asn Asn Ile Ala Gln Ala Arg Arg
1               5                  10                  15
Thr Val Gln Gln Leu Arg Leu Glu Ala Ser Ile Glu Arg Ile Lys Val
            20                  25                  30
Ser Lys Ala Ser Ala Asp Leu Met Ser Tyr Cys Glu Glu His Ala Arg
        35                  40                  45
Ser Asp Pro Leu Leu Ile Gly Ile Pro Thr Ser Glu Asn Pro Phe Lys
    50                  55                  60
Asp Lys Lys Thr Cys Ile Ile Leu
65                  70
```

<210> 264
<211> 462
<212> PRT
<213> Homo sapiens
<400> 264

```
Met Lys Thr Arg Arg Thr Thr Arg Leu Gln Gln Gln His Ser Glu Gln
1               5                  10                  15
Pro Pro Leu Gln Pro Ser Pro Val Thr Thr Arg Arg Gly Leu Arg Asp
            20                  25                  30
Ser His Ser Ser Glu Glu Asp Glu Ala Ser Ser Gln Thr Asp Leu Ser
        35                  40                  45
Gln Thr Ile Ser Lys Lys Thr Val Arg Ser Ile Gln Glu Ala Pro Val
    50                  55                  60
Ser Glu Asp Leu Val Ile Arg Leu Arg Arg Pro Pro Leu Arg Cys Pro
65                  70                  75                  80
Arg Tyr Glu Ala Thr Ser Val Gln Gln Lys Val Asn Phe Ser Glu Glu
                85                  90                  95
Gly Glu Thr Glu Glu Asp Asp Gln Asp Ser Ser His Ser Ser Val Thr
            100                 105                 110
Thr Val Lys Ala Arg Ser Arg Asp Ser Asp Glu Ser Gly Asp Lys Thr
        115                 120                 125
Thr Arg Ser Ser Ser Gln Tyr Ile Glu Ser Phe Trp Gln Ser Ser Gln
    130                 135                 140
Ser Gln Asn Phe Thr Ala His Asp Lys Gln Arg Ser Val Leu Ser Ser
145                 150                 155                 160
Gly Tyr Gln Lys Thr Pro Gln Glu Trp Ala Pro Gln Thr Ala Arg Ile
                165                 170                 175
Arg Thr Arg Met Gln Asn Asp Ser Ile Leu Lys Ser Glu Leu Gly Asn
            180                 185                 190
Gln Ser Pro Ser Thr Ser Ser Arg Gln Val Thr Gly Gln Pro Gln Asn
        195                 200                 205
Ala Ser Phe Val Lys Arg Asn Arg Trp Trp Leu Leu Pro Leu Ile Ala
    210                 215                 220
Ala Leu Ala Ser Gly Ser Phe Trp Phe Phe Ser Thr Pro Glu Val Glu
225                 230                 235                 240
Thr Thr Ala Val Gln Glu Phe Gln Asn Gln Met Asn Gln Leu Lys Asn
                245                 250                 255
Lys Tyr Gln Gly Gln Asp Glu Lys Leu Trp Lys Arg Ser Gln Thr Phe
            260                 265                 270
```

```
Leu Glu Lys His Leu Asn Ser Ser His Pro Arg Ser Gln Pro Ala Ile
        275                 280                 285
Leu Leu Leu Thr Ala Ala Arg Asp Ala Glu Glu Ala Leu Arg Cys Leu
    290                 295                 300
Ser Glu Gln Ile Ala Asp Ala Tyr Ser Ser Phe Arg Ser Val Arg Ala
305                 310                 315                 320
Ile Arg Ile Asp Gly Thr Asp Lys Ala Thr Gln Asp Ser Asp Thr Val
                325                 330                 335
Lys Leu Glu Val Asp Gln Glu Leu Ser Asn Gly Phe Lys Asn Gly Gln
            340                 345                 350
Asn Ala Ala Val Val His Arg Phe Glu Ser Phe Pro Ala Gly Ser Thr
        355                 360                 365
Leu Ile Phe Tyr Lys Tyr Cys Asp His Glu Asn Ala Ala Phe Lys Asp
    370                 375                 380
Val Ala Leu Val Leu Thr Val Leu Leu Glu Glu Glu Thr Leu Gly Thr
385                 390                 395                 400
Ser Leu Gly Leu Lys Glu Val Glu Glu Lys Val Arg Asp Phe Leu Lys
                405                 410                 415
Val Lys Phe Thr Asn Ser Asn Thr Pro Asn Ser Tyr Asn His Met Asp
            420                 425                 430
Pro Asp Lys Leu Asn Gly Leu Trp Ser Arg Ile Ser His Leu Val Leu
        435                 440                 445
Pro Val Gln Pro Glu Asn Ala Leu Lys Arg Gly Ile Cys Leu
    450                 455                 460
```

<210> 265
<211> 192
<212> PRT
<213> Homo sapiens
<400> 265

```
Met Phe Ser Gln Phe Thr Asp Ile Lys Arg Lys Asp Phe Gly Ile Met
1               5                   10                  15
Phe Leu His His Leu Val Ser Ile Phe Leu Ile Thr Phe Ser Tyr Val
            20                  25                  30
Asn Asn Met Ala Arg Val Gly Thr Leu Val Leu Cys Leu His Asp Ser
        35                  40                  45
Ala Asp Ala Leu Leu Glu Ala Ala Lys Met Ala Asn Tyr Ala Lys Phe
    50                  55                  60
Gln Lys Met Cys Asp Leu Leu Phe Val Met Phe Ala Val Val Phe Ile
65                  70                  75                  80
Thr Thr Arg Leu Gly Ile Phe Pro Leu Trp Val Leu Asn Thr Thr Leu
                85                  90                  95
Phe Glu Ser Trp Glu Ile Val Gly Pro Tyr Pro Ser Trp Trp Val Phe
            100                 105                 110
Asn Leu Leu Leu Leu Leu Val Gln Gly Leu Asn Cys Phe Trp Ser Tyr
        115                 120                 125
Leu Ile Val Lys Ile Ala Cys Lys Ala Val Ser Arg Gly Lys Val Ser
    130                 135                 140
Lys Asp Asp Arg Ser Asp Ile Glu Ser Ser Ser Asp Glu Glu Asp Ser
145                 150                 155                 160
Glu Pro Pro Gly Lys Asn Pro His Thr Ala Thr Thr Thr Asn Gly Thr
                165                 170                 175
Ser Gly Thr Asn Gly Tyr Leu Leu Thr Gly Ser Cys Ser Met Asp Asp
            180                 185                 190
```

<210> 266
<211> 1838
<212> PRT
<213> Homo sapiens
<400> 266

```
Met Asp Val His Thr Arg Trp Lys Ala Arg Ser Ala Leu Arg Pro Gly
1               5                   10                  15
Ala Pro Leu Leu Pro Pro Leu Leu Leu Leu Leu Leu Trp Ala Pro Pro
            20                  25                  30
Pro Ser Arg Ala Ala Gln Pro Ala Asp Leu Leu Lys Val Leu Asp Phe
        35                  40                  45
His Asn Leu Pro Asp Gly Ile Thr Lys Thr Thr Gly Phe Cys Ala Thr
    50                  55                  60
Arg Arg Ser Ser Lys Gly Pro Asp Val Ala Tyr Arg Val Thr Lys Asp
```

65 70 75 80
Ala Gln Leu Ser Ala Pro Thr Lys Gln Leu Tyr Pro Ala Ser Ala Phe
85 90 95
Pro Glu Asp Phe Ser Ile Leu Thr Thr Val Lys Ala Lys Lys Gly Ser
100 105 110
Gln Ala Phe Leu Val Ser Ile Tyr Asn Glu Gln Gly Ile Gln Gln Ile
115 120 125
Gly Leu Glu Leu Gly Arg Ser Pro Val Phe Leu Tyr Glu Asp His Thr
130 135 140
Gly Lys Pro Gly Pro Glu Asp Tyr Pro Leu Phe Arg Gly Ile Asn Leu
145 150 155 160
Ser Asp Gly Lys Trp His Arg Ile Ala Leu Ser Val His Lys Lys Asn
165 170 175
Val Thr Leu Ile Leu Asp Cys Lys Lys Lys Thr Thr Lys Phe Leu Asp
180 185 190
Arg Ser Asp His Pro Met Ile Asp Ile Asn Gly Ile Ile Val Phe Gly
195 200 205
Thr Arg Ile Leu Asp Glu Glu Val Phe Glu Gly Asp Ile Gln Gln Leu
210 215 220
Leu Phe Val Ser Asp His Arg Ala Ala Tyr Asp Tyr Cys Glu His Tyr
225 230 235 240
Ser Pro Asp Cys Asp Thr Ala Val Pro Asp Thr Pro Gln Ser Gln Asp
245 250 255
Pro Asn Pro Asp Glu Tyr Tyr Thr Glu Gly Asp Gly Glu Gly Glu Thr
260 265 270
Tyr Tyr Tyr Glu Tyr Pro Tyr Tyr Glu Asp Pro Glu Asp Leu Gly Lys
275 280 285
Glu Pro Thr Pro Ser Lys Lys Pro Val Glu Ala Ala Lys Glu Thr Thr
290 295 300
Glu Val Pro Glu Glu Leu Thr Pro Thr Pro Thr Glu Ala Ala Pro Met
305 310 315 320
Pro Glu Thr Ser Glu Gly Ala Gly Lys Glu Glu Asp Val Gly Ile Gly
325 330 335
Asp Tyr Asp Tyr Val Pro Ser Glu Asp Tyr Tyr Thr Pro Ser Pro Tyr
340 345 350
Asp Asp Leu Thr Tyr Gly Glu Gly Glu Glu Asn Pro Asp Gln Pro Thr
355 360 365
Asp Pro Gly Ala Gly Ala Glu Ile Pro Thr Ser Thr Ala Asp Thr Ser
370 375 380
Asn Ser Ser Asn Pro Ala Pro Pro Pro Gly Glu Gly Ala Asp Asp Leu
385 390 395 400
Glu Gly Glu Phe Thr Glu Glu Thr Ile Arg Asn Leu Asp Glu Asn Tyr
405 410 415
Tyr Asp Pro Tyr Tyr Asp Pro Thr Ser Ser Pro Ser Glu Ile Gly Pro
420 425 430
Gly Met Pro Ala Asn Gln Asp Thr Ile Tyr Glu Gly Ile Gly Gly Pro
435 440 445
Arg Gly Glu Lys Gly Gln Lys Gly Glu Pro Ala Ile Ile Glu Pro Gly
450 455 460
Met Leu Ile Glu Gly Pro Pro Gly Pro Glu Gly Pro Ala Gly Leu Pro
465 470 475 480
Gly Pro Pro Gly Thr Met Gly Pro Thr Gly Gln Val Gly Asp Pro Gly
485 490 495
Glu Arg Gly Pro Pro Gly Arg Pro Gly Leu Pro Gly Ala Asp Gly Leu
500 505 510
Pro Gly Pro Pro Gly Thr Met Leu Met Leu Pro Phe Arg Phe Gly Gly
515 520 525
Gly Gly Asp Ala Gly Ser Lys Gly Pro Met Val Ser Ala Gln Glu Ser
530 535 540
Gln Ala Gln Ala Ile Leu Gln Gln Ala Arg Leu Ala Leu Arg Gly Pro
545 550 555 560
Ala Gly Pro Met Gly Leu Thr Gly Arg Pro Gly Pro Val Gly Pro Pro
565 570 575
Gly Ser Gly Gly Leu Lys Gly Glu Pro Gly Asp Val Gly Pro Gln Gly
580 585 590
Pro Arg Gly Val Gln Gly Pro Pro Gly Pro Ala Gly Lys Pro Gly Arg
595 600 605
Arg Gly Arg Ala Gly Ser Asp Gly Ala Arg Gly Met Pro Gly Gln Thr
610 615 620

```
Gly Pro Lys Gly Asp Arg Gly Phe Asp Gly Leu Ala Gly Leu Pro Gly
625                 630                 635                 640
Glu Lys Gly His Arg Gly Asp Pro Gly Pro Ser Gly Pro Pro Gly Pro
                645                 650                 655
Pro Gly Asp Asp Gly Glu Arg Gly Asp Asp Gly Glu Val Gly Pro Arg
            660                 665                 670
Gly Leu Pro Gly Glu Pro Gly Pro Arg Gly Leu Leu Gly Pro Lys Gly
        675                 680                 685
Pro Pro Gly Pro Pro Gly Pro Pro Gly Val Thr Gly Met Asp Gly Gln
    690                 695                 700
Pro Gly Pro Lys Gly Asn Val Gly Pro Gln Gly Glu Pro Gly Pro Pro
705                 710                 715                 720
Gly Gln Gln Gly Asn Pro Gly Ala Gln Gly Leu Pro Gly Pro Gln Gly
                725                 730                 735
Ala Ile Gly Pro Pro Gly Glu Lys Gly Pro Leu Gly Lys Pro Gly Leu
            740                 745                 750
Pro Gly Met Pro Gly Ala Asp Gly Pro Pro Gly His Pro Gly Lys Glu
        755                 760                 765
Gly Pro Pro Gly Glu Lys Gly Gly Gln Gly Pro Pro Gly Pro Gln Gly
    770                 775                 780
Pro Ile Gly Tyr Pro Gly Pro Arg Gly Val Lys Gly Ala Asp Gly Ile
785                 790                 795                 800
Arg Gly Leu Lys Gly Thr Lys Gly Glu Lys Gly Glu Asp Gly Phe Pro
                805                 810                 815
Gly Phe Lys Gly Asp Met Gly Ile Lys Gly Asp Arg Gly Glu Ile Gly
            820                 825                 830
Pro Pro Gly Pro Arg Gly Glu Asp Gly Pro Glu Gly Pro Lys Gly Arg
        835                 840                 845
Gly Gly Pro Asn Gly Asp Pro Gly Pro Leu Gly Pro Pro Gly Glu Lys
    850                 855                 860
Gly Lys Leu Gly Val Pro Gly Leu Pro Gly Tyr Pro Gly Arg Gln Gly
865                 870                 875                 880
Pro Lys Gly Ser Ile Gly Phe Pro Gly Phe Pro Gly Ala Asn Gly Glu
                885                 890                 895
Lys Gly Gly Arg Gly Thr Pro Gly Lys Pro Gly Pro Arg Gly Gln Arg
            900                 905                 910
Gly Pro Thr Gly Pro Arg Gly Glu Arg Gly Pro Arg Gly Ile Thr Gly
        915                 920                 925
Lys Pro Gly Pro Lys Gly Asn Ser Gly Gly Asp Gly Pro Ala Gly Pro
    930                 935                 940
Pro Gly Glu Arg Gly Pro Asn Gly Pro Gln Gly Pro Thr Gly Phe Pro
945                 950                 955                 960
Gly Pro Lys Gly Pro Pro Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly
                965                 970                 975
His Pro Gly Gln Arg Gly Glu Thr Gly Phe Gln Gly Lys Thr Gly Pro
            980                 985                 990
Pro Gly Pro Pro Gly Val Val Gly  Pro Gln Gly Pro Thr  Gly Glu Thr
        995                 1000                1005
Gly Pro  Met Gly Glu Arg Gly  His Pro Gly Pro Pro  Gly Pro Pro
    1010                1015                1020
Gly Glu  Gln Gly Leu Pro Gly  Leu Ala Gly Lys Glu  Gly Thr Lys
    1025                1030                1035
Gly Asp  Pro Gly Pro Ala Gly  Leu Pro Gly Lys Asp  Gly Pro Pro
    1040                1045                1050
Gly Leu  Arg Gly Phe Pro Gly  Asp Arg Gly Leu Pro  Gly Pro Val
    1055                1060                1065
Gly Ala  Leu Gly Leu Lys Gly  Asn Glu Gly Pro Pro  Gly Pro Pro
    1070                1075                1080
Gly Pro  Ala Gly Ser Pro Gly  Glu Arg Gly Pro Ala  Gly Ala Ala
    1085                1090                1095
Gly Pro  Ile Gly Ile Pro Gly  Arg Pro Gly Pro Gln  Gly Pro Pro
    1100                1105                1110
Gly Pro  Ala Gly Glu Lys Gly  Ala Pro Gly Glu Lys  Gly Pro Gln
    1115                1120                1125
Gly Pro  Ala Gly Arg Asp Gly  Leu Gln Gly Pro Val  Gly Leu Pro
    1130                1135                1140
Gly Pro  Ala Gly Pro Val Gly  Pro Pro Gly Glu Asp  Gly Asp Lys
    1145                1150                1155
Gly Glu  Ile Gly Glu Pro Gly  Gln Lys Gly Ser Lys  Gly Asp Lys
```

1160 1165 1170
Gly Glu Gln Gly Pro Pro Gly Pro Thr Gly Pro Gln Gly Pro Ile
1175 1180 1185
Gly Gln Pro Gly Pro Ser Gly Ala Asp Gly Glu Pro Gly Pro Arg
1190 1195 1200
Gly Gln Gln Gly Leu Phe Gly Gln Lys Gly Asp Glu Gly Pro Arg
1205 1210 1215
Gly Phe Pro Gly Pro Pro Gly Pro Val Gly Leu Gln Gly Leu Pro
1220 1225 1230
Gly Pro Pro Gly Glu Lys Gly Glu Thr Gly Asp Val Gly Gln Met
1235 1240 1245
Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Ser Gly Ala Pro
1250 1255 1260
Gly Ala Asp Gly Pro Gln Gly Pro Pro Gly Gly Ile Gly Asn Pro
1265 1270 1275
Gly Ala Val Gly Glu Lys Gly Glu Pro Gly Glu Ala Gly Glu Pro
1280 1285 1290
Gly Pro Ser Gly Arg Ser Gly Pro Pro Gly Pro Lys Gly Glu Arg
1295 1300 1305
Gly Glu Lys Gly Glu Ser Gly Pro Ser Gly Ala Ala Gly Pro Pro
1310 1315 1320
Gly Pro Lys Gly Pro Pro Gly Asp Asp Gly Pro Lys Gly Ser Pro
1325 1330 1335
Gly Pro Val Gly Phe Pro Gly Asp Pro Gly Pro Pro Gly Glu Pro
1340 1345 1350
Gly Pro Ala Gly Gln Asp Gly Pro Pro Gly Asp Lys Gly Asp Asp
1355 1360 1365
Gly Glu Pro Gly Gln Thr Gly Ser Pro Gly Pro Thr Gly Glu Pro
1370 1375 1380
Gly Pro Ser Gly Pro Pro Gly Lys Arg Gly Pro Pro Gly Pro Ala
1385 1390 1395
Gly Pro Glu Gly Arg Gln Gly Glu Lys Gly Ala Lys Gly Glu Ala
1400 1405 1410
Gly Leu Glu Gly Pro Pro Gly Lys Thr Gly Pro Ile Gly Pro Gln
1415 1420 1425
Gly Ala Pro Gly Lys Pro Gly Pro Asp Gly Leu Arg Gly Ile Pro
1430 1435 1440
Gly Pro Val Gly Glu Gln Gly Leu Pro Gly Ser Pro Gly Pro Asp
1445 1450 1455
Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Pro Gly Leu Lys
1460 1465 1470
Gly Asp Ser Gly Pro Lys Gly Glu Lys Gly His Pro Gly Leu Ile
1475 1480 1485
Gly Leu Ile Gly Pro Pro Gly Glu Gln Gly Glu Lys Gly Asp Arg
1490 1495 1500
Gly Leu Pro Gly Pro Gln Gly Ser Ser Gly Pro Lys Gly Glu Gln
1505 1510 1515
Gly Ile Thr Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Pro Pro
1520 1525 1530
Gly Leu Pro Gly Pro Pro Gly Pro Lys Gly Ala Lys Gly Ser Ser
1535 1540 1545
Gly Pro Thr Gly Pro Lys Gly Glu Ala Gly His Pro Gly Pro Pro
1550 1555 1560
Gly Pro Pro Gly Pro Pro Gly Glu Val Ile Gln Pro Leu Pro Ile
1565 1570 1575
Gln Ala Ser Arg Thr Arg Arg Asn Ile Asp Ala Ser Gln Leu Leu
1580 1585 1590
Asp Asp Gly Asn Gly Glu Asn Tyr Val Asp Tyr Ala Asp Gly Met
1595 1600 1605
Glu Glu Ile Phe Gly Ser Leu Asn Ser Leu Lys Leu Glu Ile Glu
1610 1615 1620
Gln Met Lys Arg Pro Leu Gly Thr Gln Gln Asn Pro Ala Arg Thr
1625 1630 1635
Cys Lys Asp Leu Gln Leu Cys His Pro Asp Phe Pro Asp Gly Glu
1640 1645 1650
Tyr Trp Val Asp Pro Asn Gln Gly Cys Ser Arg Asp Ser Phe Lys
1655 1660 1665
Val Tyr Cys Asn Phe Thr Ala Gly Gly Ser Thr Cys Val Phe Pro
1670 1675 1680

```
Asp Lys  Lys Ser Glu Gly Ala  Arg Ile Thr Ser Trp  Pro Lys Glu
    1685                 1690                 1695
Asn Pro  Gly Ser Trp Phe Ser  Glu Phe Lys Arg Gly  Lys Leu Leu
    1700                 1705                 1710
Ser Tyr  Val Asp Ala Glu Gly  Asn Pro Val Gly Val  Val Gln Met
    1715                 1720                 1725
Thr Phe  Leu Arg Leu Leu Ser  Ala Ser Ala His Gln  Asn Val Thr
    1730                 1735                 1740
Tyr His  Cys Tyr Gln Ser Val  Ala Trp Gln Asp Ala  Ala Thr Gly
    1745                 1750                 1755
Ser Tyr  Asp Lys Ala Leu Arg  Phe Leu Gly Ser Asn  Asp Glu Glu
    1760                 1765                 1770
Met Ser  Tyr Asp Asn Asn Pro  Tyr Ile Arg Ala Leu  Val Asp Gly
    1775                 1780                 1785
Cys Ala  Thr Lys Lys Gly Tyr  Gln Lys Thr Val Leu  Glu Ile Asp
    1790                 1795                 1800
Thr Pro  Lys Val Glu Gln Val  Pro Ile Val Asp Ile  Met Phe Asn
    1805                 1810                 1815
Asp Phe  Gly Glu Ala Ser Gln  Lys Phe Gly Phe Glu  Val Gly Pro
    1820                 1825                 1830
Ala Cys  Phe Met Gly
    1835
```

<210> 267
<211> 109
<212> PRT
<213> Homo sapiens
<400> 267

```
Met Lys Phe Ile Ser Thr Ser Leu Leu Leu Met Leu Leu Val Ser Ser
1               5                  10                  15
Leu Ser Pro Val Gln Gly Val Leu Glu Val Tyr Tyr Thr Ser Leu Arg
            20                  25                  30
Cys Arg Cys Val Gln Glu Ser Ser Val Phe Ile Pro Arg Arg Phe Ile
        35                  40                  45
Asp Arg Ile Gln Ile Leu Pro Arg Gly Asn Gly Cys Pro Arg Lys Glu
    50                  55                  60
Ile Ile Val Trp Lys Lys Asn Lys Ser Ile Val Cys Val Asp Pro Gln
65                  70                  75                  80
Ala Glu Trp Ile Gln Arg Met Met Glu Val Leu Arg Lys Arg Ser Ser
                85                  90                  95
Ser Thr Leu Pro Val Pro Val Phe Lys Arg Lys Ile Pro
            100                 105
```

<210> 268
<211> 504
<212> PRT
<213> Homo sapiens
<400> 268

```
Met Phe Pro Arg Glu Lys Thr Trp Asn Ile Ser Phe Ala Gly Cys Gly
1               5                  10                  15
Phe Leu Gly Val Tyr Tyr Val Gly Val Ala Ser Cys Leu Arg Glu His
            20                  25                  30
Ala Pro Phe Leu Val Ala Asn Ala Thr His Ile Tyr Gly Ala Ser Ala
        35                  40                  45
Gly Ala Leu Thr Ala Thr Ala Leu Val Thr Gly Val Cys Leu Gly Glu
    50                  55                  60
Ala Gly Ala Lys Phe Ile Glu Val Ser Lys Glu Ala Arg Lys Arg Phe
65                  70                  75                  80
Leu Gly Pro Leu His Pro Ser Phe Asn Leu Val Lys Ile Ile Arg Ser
                85                  90                  95
Phe Leu Leu Lys Val Leu Pro Ala Asp Ser His Glu His Ala Ser Gly
            100                 105                 110
Arg Leu Gly Ile Ser Leu Thr Arg Val Ser Asp Gly Glu Asn Val Ile
        115                 120                 125
Ile Ser His Phe Asn Ser Lys Asp Glu Leu Ile Gln Ala Asn Val Cys
    130                 135                 140
Ser Gly Phe Ile Pro Val Tyr Cys Gly Leu Ile Pro Pro Ser Leu Gln
145                 150                 155                 160
Gly Val Arg Tyr Val Asp Gly Gly Ile Ser Asp Asn Leu Pro Leu Tyr
```

```
                165                 170                 175
Glu Leu Lys Asn Thr Ile Thr Val Ser Pro Phe Ser Gly Glu Ser Asp
            180                 185                 190
Ile Cys Pro Gln Asp Ser Ser Thr Asn Ile His Glu Leu Arg Val Thr
        195                 200                 205
Asn Thr Ser Ile Gln Phe Asn Leu Arg Asn Leu Tyr Arg Leu Ser Lys
    210                 215                 220
Ala Leu Phe Pro Pro Glu Pro Leu Val Leu Arg Glu Met Cys Lys Gln
225                 230                 235                 240
Gly Tyr Arg Asp Gly Leu Arg Phe Leu Gln Arg Asn Gly Leu Leu Asn
                245                 250                 255
Arg Pro Asn Pro Leu Leu Ala Leu Pro Pro Ala Arg Pro His Gly Pro
            260                 265                 270
Glu Asp Lys Asp Gln Ala Val Glu Ser Ala Gln Ala Glu Asp Tyr Ser
        275                 280                 285
Gln Leu Pro Gly Glu Asp His Ile Leu Glu His Leu Pro Ala Arg Leu
    290                 295                 300
Asn Glu Ala Leu Leu Glu Ala Cys Val Glu Pro Thr Asp Leu Leu Thr
305                 310                 315                 320
Thr Leu Ser Asn Met Leu Pro Val Arg Leu Ala Thr Ala Met Met Val
                325                 330                 335
Pro Tyr Thr Leu Pro Leu Glu Ser Ala Leu Ser Phe Thr Ile Arg Leu
            340                 345                 350
Leu Glu Trp Leu Pro Asp Val Pro Glu Asp Ile Arg Trp Met Lys Glu
        355                 360                 365
Gln Thr Gly Ser Ile Cys Gln Tyr Leu Val Met Arg Ala Lys Arg Lys
    370                 375                 380
Leu Gly Arg His Leu Pro Ser Arg Leu Pro Glu Gln Val Glu Leu Arg
385                 390                 395                 400
Arg Val Gln Ser Leu Pro Ser Val Pro Leu Ser Cys Ala Ala Tyr Arg
                405                 410                 415
Glu Ala Leu Pro Gly Trp Met Arg Asn Asn Leu Ser Leu Gly Asp Ala
            420                 425                 430
Leu Ala Lys Trp Glu Glu Cys Gln Arg Gln Leu Leu Leu Gly Leu Phe
        435                 440                 445
Cys Thr Asn Val Ala Phe Pro Pro Glu Ala Leu Arg Met Arg Ala Pro
    450                 455                 460
Ala Asp Pro Ala Pro Ala Pro Ala Asp Pro Ala Ser Pro Gln His Gln
465                 470                 475                 480
Pro Ala Gly Pro Ala Pro Leu Leu Ser Thr Pro Ala Pro Glu Ala Arg
                485                 490                 495
Pro Val Ile Gly Ala Leu Gly Leu
            500
```

<210> 269
<211> 1498
<212> PRT
<213> Homo sapiens
<400> 269

```
Met Val Ala Leu Arg Gly Leu Gly Ser Gly Leu Gln Pro Trp Cys Pro
1                 5                  10                  15
Leu Asp Leu Arg Leu Glu Trp Val Asp Thr Val Trp Glu Leu Asp Phe
            20                  25                  30
Thr Glu Thr Glu Pro Leu Asp Pro Ser Ile Glu Ala Glu Ile Ile Glu
        35                  40                  45
Thr Gly Leu Ala Ala Phe Thr Lys Leu Tyr Glu Ser Leu Leu Pro Phe
    50                  55                  60
Ala Thr Gly Glu His Gly Ser Met Glu Ser Ile Trp Thr Phe Phe Ile
65                  70                  75                  80
Glu Asn Asn Val Ser His Ser Thr Leu Val Ala Leu Phe Tyr His Phe
                85                  90                  95
Val Gln Ile Val His Lys Lys Asn Val Ser Val Gln Tyr Arg Glu Tyr
            100                 105                 110
Gly Leu His Ala Ala Gly Leu Tyr Phe Leu Leu Leu Glu Val Pro Gly
        115                 120                 125
Ser Val Ala Asn Gln Val Phe His Pro Val Met Phe Asp Lys Cys Ile
    130                 135                 140
Gln Thr Leu Lys Lys Ser Trp Pro Gln Glu Ser Asn Leu Asn Arg Lys
145                 150                 155                 160
```

Arg Lys Lys Glu Gln Pro Lys Ser Ser Gln Ala Asn Pro Gly Arg His
165 170 175
Arg Lys Arg Gly Lys Pro Pro Arg Arg Glu Asp Ile Glu Met Asp Glu
180 185 190
Ile Ile Glu Glu Gln Glu Asp Glu Asn Ile Cys Phe Ser Ala Arg Asp
195 200 205
Leu Ser Gln Ile Arg Asn Ala Ile Phe His Leu Leu Lys Asn Phe Leu
210 215 220
Arg Leu Leu Pro Lys Phe Ser Leu Lys Glu Lys Pro Gln Cys Val Gln
225 230 235 240
Asn Cys Ile Glu Val Phe Val Ser Leu Thr Asn Phe Glu Pro Val Leu
245 250 255
His Glu Cys His Val Thr Gln Ala Arg Ala Leu Asn Gln Ala Lys Tyr
260 265 270
Ile Pro Glu Leu Ala Tyr Tyr Gly Leu Tyr Leu Leu Cys Ser Pro Ile
275 280 285
His Gly Glu Gly Asp Lys Val Ile Ser Cys Val Phe His Gln Met Leu
290 295 300
Ser Val Ile Leu Met Leu Glu Val Gly Glu Gly Ser His Arg Ala Pro
305 310 315 320
Leu Ala Val Thr Ser Gln Val Ile Asn Cys Arg Asn Gln Ala Val Gln
325 330 335
Phe Ile Ser Ala Leu Val Asp Glu Leu Lys Glu Ser Ile Phe Pro Val
340 345 350
Val Arg Ile Leu Leu Gln His Ile Cys Ala Lys Val Val Asp Lys Ser
355 360 365
Glu Tyr Arg Thr Phe Ala Ala Gln Ser Leu Val Gln Leu Leu Ser Lys
370 375 380
Leu Pro Cys Gly Glu Tyr Ala Met Phe Ile Ala Trp Leu Tyr Lys Tyr
385 390 395 400
Ser Arg Ser Ser Lys Ile Pro His Arg Val Phe Thr Leu Asp Val Val
405 410 415
Leu Ala Leu Leu Glu Leu Pro Glu Arg Glu Val Asp Asn Thr Leu Ser
420 425 430
Leu Glu His Gln Lys Phe Leu Lys His Lys Phe Leu Val Gln Glu Ile
435 440 445
Met Phe Asp Arg Cys Leu Asp Lys Ala Pro Thr Val Arg Ser Lys Ala
450 455 460
Leu Ser Ser Phe Ala His Cys Leu Glu Leu Thr Val Thr Ser Ala Ser
465 470 475 480
Glu Ser Ile Leu Glu Leu Leu Ile Asn Ser Pro Thr Phe Ser Val Ile
485 490 495
Glu Ser His Pro Gly Thr Leu Leu Arg Asn Ser Ser Ala Phe Ser Tyr
500 505 510
Gln Arg Gln Thr Ser Asn Arg Ser Glu Pro Ser Gly Glu Ile Asn Ile
515 520 525
Asp Ser Ser Gly Glu Thr Val Gly Ser Gly Glu Arg Cys Val Met Ala
530 535 540
Met Leu Arg Arg Arg Ile Arg Asp Glu Lys Thr Asn Val Arg Lys Ser
545 550 555 560
Ala Leu Gln Val Leu Val Ser Ile Leu Lys His Cys Asp Val Ser Gly
565 570 575
Met Lys Glu Asp Leu Trp Ile Leu Gln Asp Gln Cys Arg Asp Pro Ala
580 585 590
Val Ser Val Arg Lys Gln Ala Leu Gln Ser Leu Thr Glu Leu Leu Met
595 600 605
Ala Gln Pro Arg Cys Val Gln Ile Gln Lys Ala Trp Leu Arg Gly Val
610 615 620
Val Pro Val Val Met Asp Cys Glu Ser Thr Val Gln Glu Lys Ala Leu
625 630 635 640
Glu Phe Leu Asp Gln Leu Leu Leu Gln Asn Ile Arg His His Ser His
645 650 655
Phe His Ser Gly Asp Asp Ser Gln Val Leu Ala Trp Ala Leu Leu Thr
660 665 670
Leu Leu Thr Thr Glu Ser Gln Glu Leu Ser Arg Tyr Leu Asn Lys Ala
675 680 685
Phe His Ile Trp Ser Lys Lys Glu Lys Phe Ser Pro Thr Phe Ile Asn
690 695 700
Asn Val Ile Ser His Thr Gly Thr Glu His Ser Ala Pro Ala Trp Met

705 710 715 720
Leu Leu Ser Lys Ile Ala Gly Ser Ser Pro Arg Leu Asp Tyr Ser Arg
725 730 735
Ile Ile Gln Ser Trp Glu Lys Ile Ser Ser Gln Gln Asn Pro Asn Ser
740 745 750
Asn Thr Leu Gly His Ile Leu Cys Val Ile Gly His Ile Ala Lys His
755 760 765
Leu Pro Lys Ser Thr Arg Asp Lys Val Thr Asp Ala Val Lys Cys Lys
770 775 780
Leu Asn Gly Phe Gln Trp Ser Leu Glu Val Ile Ser Ser Ala Val Asp
785 790 795 800
Ala Leu Gln Arg Leu Cys Arg Ala Ser Ala Glu Thr Pro Ala Glu Glu
805 810 815
Gln Glu Leu Leu Thr Gln Val Cys Gly Asp Val Leu Ser Thr Cys Glu
820 825 830
His Arg Leu Ser Asn Ile Val Leu Lys Glu Asn Gly Thr Gly Asn Met
835 840 845
Asp Glu Asp Leu Leu Val Lys Tyr Ile Phe Thr Leu Gly Asp Ile Ala
850 855 860
Gln Leu Cys Pro Ala Arg Val Glu Lys Arg Ile Phe Leu Leu Ile Gln
865 870 875 880
Ser Val Leu Ala Ser Ser Ala Asp Ala Asp His Ser Pro Ser Ser Gln
885 890 895
Gly Ser Ser Glu Ala Pro Ala Ser Gln Pro Pro Pro Gln Val Arg Gly
900 905 910
Ser Val Met Pro Ser Val Ile Arg Ala His Ala Ile Ile Thr Leu Gly
915 920 925
Lys Leu Cys Leu Gln His Glu Asp Leu Ala Lys Lys Ser Ile Pro Ala
930 935 940
Leu Val Arg Glu Leu Glu Val Cys Glu Asp Val Ala Val Arg Asn Asn
945 950 955 960
Val Ile Ile Val Met Cys Asp Leu Cys Ile Arg Tyr Thr Ile Met Val
965 970 975
Asp Lys Tyr Ile Pro Asn Ile Ser Met Cys Leu Lys Asp Ser Asp Pro
980 985 990
Phe Ile Arg Lys Gln Thr Leu Ile Leu Leu Thr Asn Leu Leu Gln Glu
995 1000 1005
Glu Phe Val Lys Trp Lys Gly Ser Leu Phe Phe Arg Phe Val Ser
1010 1015 1020
Thr Leu Ile Asp Ser His Pro Asp Ile Ala Ser Phe Gly Glu Phe
1025 1030 1035
Cys Leu Ala His Leu Leu Leu Lys Arg Asn Pro Val Met Phe Phe
1040 1045 1050
Gln His Phe Ile Glu Cys Ile Phe His Phe Asn Asn Tyr Glu Lys
1055 1060 1065
His Glu Lys Tyr Asn Lys Phe Pro Gln Ser Glu Arg Glu Lys Arg
1070 1075 1080
Leu Phe Ser Leu Lys Gly Lys Ser Asn Lys Glu Arg Arg Met Lys
1085 1090 1095
Ile Tyr Lys Phe Leu Leu Glu His Phe Thr Asp Glu Gln Arg Phe
1100 1105 1110
Asn Ile Thr Ser Lys Ile Cys Leu Ser Ile Leu Ala Cys Phe Ala
1115 1120 1125
Asp Gly Ile Leu Pro Leu Asp Leu Asp Ala Ser Glu Leu Leu Ser
1130 1135 1140
Asp Thr Phe Glu Val Leu Ser Ser Lys Glu Ile Lys Leu Leu Ala
1145 1150 1155
Met Arg Ser Lys Pro Asp Lys Asp Leu Leu Met Glu Glu Asp Asp
1160 1165 1170
Met Ala Leu Ala Asn Val Val Met Gln Glu Ala Gln Lys Lys Leu
1175 1180 1185
Ile Ser Gln Val Gln Lys Arg Asn Phe Ile Glu Asn Ile Ile Pro
1190 1195 1200
Ile Ile Ile Ser Leu Lys Thr Val Leu Glu Lys Asn Lys Ile Pro
1205 1210 1215
Ala Leu Arg Glu Leu Met His Tyr Leu Arg Glu Val Met Gln Asp
1220 1225 1230
Tyr Arg Asp Glu Leu Lys Asp Phe Phe Ala Val Asp Lys Gln Leu
1235 1240 1245

```
Ala Ser  Glu Leu Glu Tyr Asp  Met Lys Lys Tyr Gln  Glu Gln Leu
    1250                 1255                 1260
Val Gln  Glu Gln Glu Leu Ala  Lys His Ala Asp Val  Ala Gly Thr
    1265                 1270                 1275
Ala Gly  Gly Ala Glu Val Ala  Pro Val Ala Gln Val  Ala Leu Cys
    1280                 1285                 1290
Leu Glu  Thr Val Pro Val Pro  Ala Gly Gln Glu Asn  Pro Ala Met
    1295                 1300                 1305
Ser Pro  Ala Val Ser Gln Pro  Cys Thr Pro Arg Ala  Ser Ala Gly
    1310                 1315                 1320
His Val  Ala Val Ser Ser Pro  Thr Pro Glu Thr Gly  Pro Leu Gln
    1325                 1330                 1335
Arg Leu  Leu Pro Lys Ala Arg  Pro Met Ser Leu Ser  Thr Ile Ala
    1340                 1345                 1350
Ile Leu  Asn Ser Val Lys Lys  Ala Val Glu Ser Lys  Ser Arg His
    1355                 1360                 1365
Arg Ser  Arg Ser Leu Gly Val  Leu Pro Phe Thr Leu  Asn Ser Gly
    1370                 1375                 1380
Ser Pro  Glu Lys Thr Cys Ser  Gln Val Ser Ser Tyr  Ser Leu Glu
    1385                 1390                 1395
Gln Glu  Ser Asn Gly Glu Ile  Glu His Val Thr Lys  Arg Ala Ile
    1400                 1405                 1410
Ser Thr  Pro Glu Lys Ser Ile  Ser Asp Val Thr Phe  Gly Ala Gly
    1415                 1420                 1425
Val Ser  Tyr Ile Gly Thr Pro  Arg Thr Pro Ser Ser  Ala Lys Glu
    1430                 1435                 1440
Lys Ile  Glu Gly Arg Ser Gln  Gly Asn Asp Ile Leu  Cys Leu Ser
    1445                 1450                 1455
Leu Pro  Asp Lys Pro Pro Pro  Gln Pro Gln Gln Trp  Asn Val Arg
    1460                 1465                 1470
Ser Pro  Ala Arg Asn Lys Asp  Thr Pro Ala Cys Ser  Arg Arg Ser
    1475                 1480                 1485
Leu Arg  Lys Thr Pro Leu Lys  Thr Ala Asn
    1490                 1495
```

<210> 270
<211> 551
<212> PRT
<213> Homo sapiens
<400> 270

```
Met Pro Thr Pro Gly Ala Ala Ser Leu Leu Ser Ala Val Gln Ala Gln
1               5                  10                  15
Glu Arg Arg Leu Tyr Val Pro Leu Pro Gly Gly Phe Ser Val Pro Pro
            20                  25                  30
Val Thr Pro Met Pro His Cys Leu Leu Asp Pro Lys Glu Asp Leu Lys
        35                  40                  45
Gly Cys Pro Gln Ala Cys Ser Gly Cys Ser Met Gly Thr Pro Ala Pro
    50                  55                  60
Ser Tyr Leu Val Gln Gly Ala Gln Gly Met Pro Leu Arg Lys Ala Ala
65                  70                  75                  80
Ser Leu Ala Thr Lys Leu Glu Glu Met Gly Leu Phe Gly Gln Gln Cys
                85                  90                  95
Leu Pro Ala Met Gly Tyr Thr Cys Arg Cys Arg Glu Pro Leu Leu Leu
            100                 105                 110
Pro Ser His Leu Ile Gly Val Gly Phe Pro Gln Ala Pro Ala Pro Gln
        115                 120                 125
Leu Leu Ser Ala Leu Leu Leu Leu Pro Ala Pro Pro Ser Pro Ala Gln
    130                 135                 140
Ser Glu Val His Pro Pro Val Arg Gly Ala Glu Gln Cys Cys Lys Leu
145                 150                 155                 160
Ser Ala Pro Glu Tyr Pro Gly Asp Leu Leu Asn Cys Thr Phe Ser Phe
                165                 170                 175
Cys Lys Pro Glu Leu Ser Leu Cys Thr Ser Asn Leu Leu Pro Gly Asn
            180                 185                 190
Ala Ala Val Thr Glu Gln Ser Gly Lys Val Leu Asp Asn Thr Leu Gly
        195                 200                 205
Gly Asn Phe Ser Leu Lys Cys Ile Gly Ala Glu Thr Arg Thr Pro Cys
    210                 215                 220
Gln Ala Ala Leu Trp Val Phe Glu Ala Lys Val Ser Arg Leu Met Lys
```

225 230 235 240
Ser Ala Ser Cys Gln Arg Gln Arg Ile His Trp Gln Gln Gly Ala Leu
245 250 255
Ala Ala Val Arg Gln Gly Asp Leu Gly Leu Lys Tyr Lys Glu Ile Ser
260 265 270
Cys Lys Asp Ala Gly Val Phe His Gly Thr Ser Ser Ser Gly Lys Leu
275 280 285
His Ser His Gly Lys Thr Leu Glu Pro Glu Ser Gly Lys Ala Ile Arg
290 295 300
Ala Trp Ile Leu Glu Ile Leu Ser Ser Cys Lys Pro Gly Ser Leu Val
305 310 315 320
Gln Met Ala Lys Asn Met Thr Met Asp Arg Ala Cys Ala Tyr Leu Val
325 330 335
Thr Cys Arg Glu Ala Thr Leu Trp Trp Gly Val Val Ala Gly Ser Leu
340 345 350
Val Tyr Glu His Gly Asn Gln Lys Pro Ile Pro Val Thr Val Trp Arg
355 360 365
Gly Gly Glu Arg Arg Gly Met Val Pro Thr Lys Lys Asp Thr Ser Thr
370 375 380
Ser Val Leu Phe Ile Gln Ile His Val Leu Thr Phe Ser Ala Glu Asn
385 390 395 400
Lys Ile Gln Ser Asn Cys Asn Ser Ser Ser Cys Ile Arg Pro Thr Gly
405 410 415
Arg Arg Glu Arg Asp Val Thr Asn Gln Thr His Ala Ser Gly Lys Arg
420 425 430
Cys Val Ala Gly Leu Ala Pro Glu Gly Ser Asp Glu Gly Leu Leu Pro
435 440 445
Ala Thr Leu Pro Cys Leu Gly Phe Pro Lys Leu Leu Ser Ala Glu Glu
450 455 460
Arg Ala Asn His Gly Gln Pro Arg Asn Thr Arg Pro Cys Gln Leu Asp
465 470 475 480
Leu Asp Cys Ala Ile Phe Gly His Phe His Thr Leu Pro Asn Lys Leu
485 490 495
Leu Leu Val Ser Val Ser Glu Ile Leu Thr Ser Glu Ile Leu Thr Leu
500 505 510
Ala Asn Leu Leu Gln Gly Cys Gln His Glu Pro Glu Arg Tyr Gly His
515 520 525
Val Thr Asp Pro Glu His Lys Thr Thr Ser Ala Phe Thr Val Ser Lys
530 535 540
Ala Ser Arg Trp Arg Lys Asn
545 550

<210> 271
<211> 2779
<212> PRT
<213> Homo sapiens
<400> 271
Met Gln Gly Asp Leu Lys Thr Thr Asp Ile Ser Ile Glu Pro Pro Ser
1 5 10 15
Ala Gln Leu Glu Val Gln Ala Gly Gln Val Asp Leu Lys Leu Pro Glu
20 25 30
Gly His Val Pro Glu Gly Ala Gly Leu Lys Gly His Leu Pro Lys Leu
35 40 45
Gln Met Pro Ser Phe Lys Met Pro Lys Val Asp Arg Lys Gly Pro Gln
50 55 60
Ile Asp Val Lys Gly Pro Lys Leu Asp Leu Lys Gly Pro Lys Thr Asp
65 70 75 80
Val Thr Ala Pro Asp Val Glu Val Ser Gln Pro Gly Met Glu Val Asp
85 90 95
Val Glu Ala Pro Gly Ala Lys Leu Asp Gly Ala Arg Leu Glu Gly Asp
100 105 110
Leu Ser Leu Ala Asp Lys Asp Val Thr Ala Lys Asp Ser Lys Phe Lys
115 120 125
Met Pro Lys Phe Lys Met Pro Ser Phe Gly Val Ser Ala Pro Gly Lys
130 135 140
Ser Ile Glu Val Leu Val Asp Val Ser Ala Pro Lys Val Glu Ala Asp
145 150 155 160
Leu Ser Leu Pro Ser Met Gln Gly Asp Leu Lys Asn Thr Asp Ile Ser
165 170 175

Ile Glu Pro Pro Ser Ala Gln Leu Glu Val Gln Ala Gly Gln Val Asp
180 185 190
Val Lys Leu Pro Glu Gly His Val Leu Glu Gly Ala Gly Leu Lys Gly
195 200 205
His Leu Pro Lys Leu Gln Met Pro Ser Phe Lys Met Pro Lys Val Asp
210 215 220
Arg Lys Gly Pro Gln Ile Asp Ile Lys Gly Pro Lys Leu Asp Leu Lys
225 230 235 240
Gly Pro Lys Met Asp Val Thr Ala Pro Asp Val Glu Val Ser Gln Pro
245 250 255
Ser Met Glu Val Asp Val Glu Ala Pro Gly Ala Lys Leu Asp Gly Ala
260 265 270
Arg Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp Val Thr Ala Lys
275 280 285
Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro Ser Tyr Arg Ala
290 295 300
Ser Ala Pro Gly Lys Ser Ile Gln Ala Ser Val Asp Val Ser Ala Pro
305 310 315 320
Lys Ala Glu Ala Asp Val Ser Leu Pro Ser Met Gln Gly Asp Leu Lys
325 330 335
Thr Thr Asp Leu Ser Ile Gln Leu Pro Ser Val Asp Leu Glu Val Gln
340 345 350
Ala Gly Gln Val Asp Val Lys Leu Pro Glu Gly His Val Pro Glu Gly
355 360 365
Ala Gly Leu Lys Gly His Leu Pro Lys Val Glu Met Pro Ser Phe Lys
370 375 380
Met Pro Lys Val Asp Leu Lys Ser Pro Gln Val Asp Ile Lys Gly Pro
385 390 395 400
Lys Leu Asp Leu Lys Val Pro Lys Ala Glu Val Thr Val Pro Asp Val
405 410 415
Glu Val Ser Leu Pro Ser Val Glu Val Asp Val Gln Ala Pro Arg Ala
420 425 430
Lys Leu Asp Gly Ala Arg Leu Glu Gly Asp Leu Ser Leu Ala Glu Lys
435 440 445
Asp Val Thr Ala Lys Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met
450 455 460
Pro Ser Phe Gly Val Ser Ala Pro Gly Arg Ser Ile Glu Ala Ser Leu
465 470 475 480
Asp Val Ser Ala Pro Lys Val Glu Ala Asp Val Ser Leu Ser Ser Met
485 490 495
Gln Gly Asp Leu Lys Ala Thr Asp Leu Ser Ile Gln Pro Pro Ser Ala
500 505 510
Asp Leu Glu Val Gln Ala Val Gln Val Asp Val Glu Leu Leu Glu Gly
515 520 525
Pro Val Pro Glu Gly Ala Gly Leu Lys Gly His Leu Pro Lys Val Glu
530 535 540
Met Pro Ser Leu Lys Thr Pro Lys Val Asp Leu Lys Gly Pro Gln Ile
545 550 555 560
Asp Val Lys Gly Pro Lys Leu Asp Leu Lys Gly Pro Lys Ala Glu Val
565 570 575
Arg Val Pro Asp Val Glu Val Ser Leu Pro Ser Val Glu Val Asp Val
580 585 590
Gln Ala Pro Lys Ala Lys Leu Asp Ala Gly Arg Leu Glu Gly Asp Leu
595 600 605
Ser Leu Ala Asp Lys Asp Val Thr Ala Lys Asp Ser Lys Phe Lys Met
610 615 620
Pro Lys Phe Lys Met Pro Ser Phe Arg Val Ser Ala Pro Gly Lys Ser
625 630 635 640
Met Glu Ala Ser Val Asp Val Ser Ala Pro Lys Val Glu Ala Asp Val
645 650 655
Ser Leu Pro Ser Met Gln Gly Asp Leu Lys Thr Thr Asp Leu Ser Ile
660 665 670
Gln Pro Pro Ser Ala Asp Leu Lys Val Gln Ala Gly Gln Met Asp Val
675 680 685
Lys Leu Pro Glu Gly Gln Val Pro Glu Gly Ala Gly Leu Lys Glu His
690 695 700
Leu Pro Lys Val Glu Met Pro Ser Leu Lys Met Pro Lys Val Asp Leu
705 710 715 720
Lys Gly Pro Gln Val Asp Ile Lys Gly Pro Lys Leu Asp Leu Lys Val

Ser Lys Ala Glu Val Thr Ala Pro Asp Val Glu Val Ser Leu Pro Ser
725 730 735
Val Glu Val Asp Val Gln Ala Pro Arg Ala Lys Leu Asp Ser Ala Gln
740 745 750
Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp Val Thr Ala Lys Asp
755 760 765
Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro Ser Phe Gly Val Ser
770 775 780
Ala Pro Gly Lys Ser Ile Glu Ala Ser Val His Val Ser Ala Pro Lys
785 790 795 800
Val Glu Ala Asp Val Ser Leu Pro Ser Met Gln Gly Asp Leu Lys Thr
805 810 815
Thr Asp Leu Ser Ile Gln Pro His Ser Ala Asp Leu Thr Val Gln Ala
820 825 830
Arg Gln Val Asp Met Lys Leu Leu Glu Gly His Val Pro Glu Glu Ala
835 840 845
Gly Leu Lys Gly His Leu Pro Lys Val Gln Met Pro Ser Phe Lys Met
850 855 860
Pro Lys Val Asp Leu Lys Gly Pro Glu Ile Asp Ile Lys Gly Pro Lys
865 870 875 880
Leu Asp Leu Lys Asp Pro Lys Val Glu Val Thr Ala Pro Asp Val Glu
885 890 895
Val Ser Leu Pro Ser Val Glu Val Asp Val Glu Ala Pro Gly Ala Lys
900 905 910
Leu Asp Gly Ala Arg Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp
915 920 925
Met Thr Ala Lys Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro
930 935 940
Ser Phe Gly Val Ser Ala Pro Gly Lys Ser Met Glu Ala Ser Val Asp
945 950 955 960
Val Thr Ala Pro Lys Val Glu Ala Asp Val Ser Leu Pro Ser Met Gln
965 970 975
Gly Asp Leu Lys Ala Thr Asp Leu Ser Val Gln Pro Pro Ser Ala Asp
980 985 990
Leu Glu Val Gln Ala Gly Gln Val Asp Val Lys Leu Pro Glu Gly
995 1000 1005
Pro Val Pro Glu Gly Ala Ser Leu Lys Gly His Leu Pro Lys Val
1010 1015 1020
Gln Met Pro Ser Phe Lys Met Pro Lys Val Asp Leu Lys Gly Pro
1025 1030 1035
Gln Ile Asp Val Lys Gly Pro Lys Leu Asp Leu Lys Gly Pro Lys
1040 1045 1050
Ala Glu Val Thr Ala Pro Asp Val Lys Met Ser Leu Ser Ser Met
1055 1060 1065
Glu Val Asp Val Gln Ala Pro Arg Ala Lys Leu Asp Gly Val Gln
1070 1075 1080
Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp Val Thr Ala Lys
1085 1090 1095
Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro Ser Phe Gly
1100 1105 1110
Val Ser Ala Pro Gly Lys Ser Met Glu Ala Ser Val Asp Val Ser
1115 1120 1125
Glu Leu Lys Ala Lys Ala Asp Val Ser Leu Pro Ser Met Gln Gly
1130 1135 1140
Asp Leu Lys Thr Thr Asp Leu Ser Ile Gln Ser Pro Ser Ala Asp
1145 1150 1155
Leu Glu Val Gln Ala Gly Gln Val Asp Val Lys Leu Pro Glu Gly
1160 1165 1170
Pro Leu Pro Lys Gly Ala Gly Leu Lys Gly His Leu Pro Lys Val
1175 1180 1185
Gln Met Pro Cys Leu Lys Met Pro Lys Val Ala Leu Lys Gly Pro
1190 1195 1200
Gln Val Asp Val Lys Gly Pro Lys Leu Asp Leu Lys Gly Pro Lys
1205 1210 1215
Ala Asp Val Met Thr Pro Val Val Glu Val Ser Leu Pro Ser Met
1220 1225 1230
Glu Val Asp Val Glu Ala Pro Gly Ala Lys Leu Asp Ser Val Arg
1235 1240 1245
1250 1255 1260

Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp Met Thr Ala Lys
1265 1270 1275
Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro Ser Phe Gly
1280 1285 1290
Val Ser Ala Pro Gly Lys Ser Ile Glu Ala Ser Leu Asp Val Ser
1295 1300 1305
Ala Leu Lys Val Glu Ala Asp Val Ser Leu Pro Ser Met Gln Gly
1310 1315 1320
Asp Leu Lys Thr Thr His Leu Ser Ile Gln Pro Pro Ser Ala Asp
1325 1330 1335
Leu Glu Val Gln Ala Gly Gln Glu Asp Val Lys Leu Pro Glu Gly
1340 1345 1350
Pro Val His Glu Gly Ala Gly Leu Lys Gly His Leu Pro Lys Leu
1355 1360 1365
Gln Met Pro Ser Phe Lys Val Pro Lys Val Asp Leu Lys Gly Pro
1370 1375 1380
Gln Ile Asp Val Asn Val Pro Lys Leu Asp Leu Lys Gly Pro Lys
1385 1390 1395
Val Glu Val Thr Ser Pro Asn Leu Asp Val Ser Leu Pro Ser Met
1400 1405 1410
Glu Val Asp Ile Gln Ala Pro Gly Ala Lys Leu Asp Ser Thr Arg
1415 1420 1425
Leu Glu Gly Asp Leu Ser Leu Ala Asp Lys Asp Val Thr Ala Lys
1430 1435 1440
Asp Ser Lys Phe Lys Met Pro Lys Phe Lys Met Pro Ser Phe Gly
1445 1450 1455
Met Leu Ser Pro Gly Lys Ser Ile Glu Val Ser Val Asp Val Ser
1460 1465 1470
Ala Pro Lys Met Glu Ala Asp Met Ser Ile Pro Ser Met Gln Gly
1475 1480 1485
Asp Leu Lys Thr Thr Asp Leu Arg Ile Gln Ala Pro Ser Ala Asp
1490 1495 1500
Leu Glu Val Gln Ala Gly Gln Val Asp Leu Lys Leu Pro Glu Gly
1505 1510 1515
His Met Pro Glu Val Ala Gly Leu Lys Gly His Leu Pro Lys Val
1520 1525 1530
Glu Met Pro Ser Phe Lys Met Pro Lys Val Asp Leu Lys Gly Pro
1535 1540 1545
Gln Val Asp Val Lys Gly Pro Lys Leu Asp Leu Lys Gly Pro Lys
1550 1555 1560
Ala Glu Val Met Ala Pro Asp Val Glu Val Ser Leu Pro Ser Val
1565 1570 1575
Glu Thr Asp Val Gln Ala Pro Gly Ser Met Leu Asp Gly Ala Arg
1580 1585 1590
Leu Glu Gly Asp Leu Ser Leu Ala His Glu Asp Val Ala Gly Lys
1595 1600 1605
Asp Ser Lys Phe Gln Gly Pro Lys Leu Ser Thr Ser Gly Phe Glu
1610 1615 1620
Trp Ser Ser Lys Lys Val Ser Met Ser Ser Ser Glu Ile Glu Gly
1625 1630 1635
Asn Val Thr Phe His Glu Lys Thr Ser Thr Phe Pro Ile Val Glu
1640 1645 1650
Ser Val Val His Glu Gly Asp Leu His Asp Pro Ser Arg Asp Gly
1655 1660 1665
Asn Leu Gly Leu Ala Val Gly Glu Val Gly Met Asp Ser Lys Phe
1670 1675 1680
Lys Lys Leu His Phe Lys Val Pro Lys Val Ser Phe Ser Ser Thr
1685 1690 1695
Lys Thr Pro Lys Asp Ser Leu Val Pro Gly Ala Lys Ser Ser Ile
1700 1705 1710
Gly Leu Ser Thr Ile Pro Leu Ser Ser Ser Glu Cys Ser Ser Phe
1715 1720 1725
Glu Leu Gln Gln Val Ser Ala Cys Ser Glu Pro Ser Met Gln Met
1730 1735 1740
Pro Lys Val Gly Phe Ala Gly Phe Pro Ser Ser Arg Leu Asp Leu
1745 1750 1755
Thr Gly Pro His Phe Glu Ser Ser Ile Leu Ser Pro Cys Glu Asp
1760 1765 1770
Val Thr Leu Thr Lys Tyr Gln Val Thr Val Pro Arg Ala Ala Leu

1775 1780 1785
Ala Pro Glu Leu Ala Leu Glu Ile Pro Ser Gly Ser Gln Ala Asp
1790 1795 1800
Ile Pro Leu Pro Lys Thr Glu Cys Ser Thr Asp Leu Gln Pro Pro
1805 1810 1815
Glu Gly Val Pro Thr Ser Gln Ala Glu Ser His Ser Gly Pro Leu
1820 1825 1830
Asn Ser Met Ile Pro Val Ser Leu Gly Gln Val Ser Phe Pro Lys
1835 1840 1845
Phe Tyr Lys Pro Lys Phe Val Phe Ser Val Pro Gln Met Ala Val
1850 1855 1860
Pro Glu Gly Asp Leu His Ala Ala Val Gly Ala Pro Val Met Ser
1865 1870 1875
Pro Leu Ser Pro Gly Glu Arg Val Gln Cys Pro Leu Pro Ser Thr
1880 1885 1890
Gln Leu Pro Ser Pro Gly Thr Cys Val Ser Gln Gly Pro Glu Glu
1895 1900 1905
Leu Val Ala Ser Leu Gln Thr Ser Val Val Ala Pro Gly Glu Ala
1910 1915 1920
Pro Ser Glu Asp Ala Asp His Glu Gly Lys Gly Ser Pro Leu Lys
1925 1930 1935
Met Pro Lys Ile Lys Leu Pro Ser Phe Arg Trp Ser Pro Lys Lys
1940 1945 1950
Glu Thr Gly Pro Lys Val Asp Pro Glu Cys Ser Val Glu Asp Ser
1955 1960 1965
Lys Leu Ser Leu Val Leu Asp Lys Asp Glu Val Ala Pro Gln Ser
1970 1975 1980
Ala Ile His Met Asp Leu Pro Pro Glu Arg Asp Gly Glu Lys Gly
1985 1990 1995
Arg Ser Thr Lys Pro Gly Phe Ala Met Pro Lys Leu Ala Leu Pro
2000 2005 2010
Lys Met Lys Ala Ser Lys Ser Gly Val Ser Leu Pro Gln Arg Asp
2015 2020 2025
Val Asp Pro Ser Leu Ser Ser Ala Thr Ala Gly Gly Ser Phe Gln
2030 2035 2040
Asp Thr Glu Lys Ala Ser Ser Asp Gly Gly Arg Gly Gly Leu Gly
2045 2050 2055
Ala Thr Ala Ser Ala Thr Gly Ser Glu Gly Val Asn Leu His Arg
2060 2065 2070
Pro Gln Val His Ile Pro Ser Leu Gly Phe Ala Lys Pro Asp Leu
2075 2080 2085
Arg Ser Ser Lys Ala Lys Val Glu Val Ser Gln Pro Glu Ala Asp
2090 2095 2100
Leu Pro Leu Pro Lys His Asp Leu Ser Thr Glu Gly Asp Ser Arg
2105 2110 2115
Gly Cys Gly Leu Gly Asp Val Pro Val Ser Gln Pro Cys Gly Glu
2120 2125 2130
Gly Ile Ala Pro Thr Pro Glu Asp Pro Leu Gln Pro Ser Cys Arg
2135 2140 2145
Lys Pro Asp Ala Glu Val Leu Thr Val Glu Ser Pro Glu Glu Glu
2150 2155 2160
Ala Met Thr Lys Tyr Ser Gln Glu Ser Trp Phe Lys Met Pro Lys
2165 2170 2175
Phe Arg Met Pro Ser Leu Arg Arg Ser Phe Arg Asp Arg Gly Gly
2180 2185 2190
Ala Gly Lys Leu Glu Val Ala Gln Thr Gln Ala Pro Ala Ala Thr
2195 2200 2205
Gly Gly Glu Ala Ala Ala Lys Val Lys Glu Phe Leu Val Ser Gly
2210 2215 2220
Ser Asn Val Glu Ala Ala Met Ser Leu Gln Leu Pro Glu Ala Asp
2225 2230 2235
Ala Glu Val Thr Ala Ser Glu Ser Lys Ser Ser Thr Asp Ile Leu
2240 2245 2250
Arg Cys Asp Leu Asp Ser Thr Gly Leu Lys Leu His Leu Ser Thr
2255 2260 2265
Ala Gly Met Thr Gly Asp Glu Leu Ser Thr Ser Glu Val Arg Ile
2270 2275 2280
His Pro Ser Lys Gly Pro Leu Pro Phe Gln Met Pro Gly Met Arg
2285 2290 2295

Leu Pro Glu Thr Gln Val Leu Pro Gly Glu Ile Asp Glu Thr Pro
2300 2305 2310
Leu Ser Lys Pro Gly His Asp Leu Ala Ser Met Glu Asp Lys Thr
2315 2320 2325
Glu Lys Trp Ser Ser Gln Pro Glu Gly Pro Leu Lys Leu Lys Ala
2330 2335 2340
Ser Ser Thr Asp Met Pro Ser Gln Ile Ser Val Val Asn Val Asp
2345 2350 2355
Gln Leu Trp Glu Asp Ser Val Leu Thr Val Lys Phe Pro Lys Leu
2360 2365 2370
Met Val Pro Arg Phe Ser Phe Pro Ala Pro Ser Ser Glu Asp Asp
2375 2380 2385
Val Phe Ile Pro Thr Val Arg Glu Val Gln Cys Pro Glu Ala Asn
2390 2395 2400
Ile Asp Thr Ala Leu Cys Lys Glu Ser Pro Gly Leu Trp Gly Ala
2405 2410 2415
Ser Ile Leu Lys Ala Gly Ala Gly Val Pro Gly Glu Gln Pro Val
2420 2425 2430
Asp Leu Asn Leu Pro Leu Glu Ala Pro Pro Ile Ser Lys Val Arg
2435 2440 2445
Val His Ile Gln Gly Ala Gln Val Glu Ser Gln Glu Val Thr Ile
2450 2455 2460
His Ser Ile Val Thr Pro Glu Phe Val Asp Leu Ser Val Pro Arg
2465 2470 2475
Thr Phe Ser Thr Gln Ile Val Arg Glu Ser Glu Ile Pro Thr Ser
2480 2485 2490
Glu Ile Gln Thr Pro Ser Tyr Gly Phe Ser Leu Leu Lys Val Lys
2495 2500 2505
Ile Pro Glu Pro His Thr Gln Ala Arg Val Tyr Thr Thr Met Thr
2510 2515 2520
Gln His Ser Arg Thr Gln Glu Gly Thr Glu Glu Ala Pro Ile Gln
2525 2530 2535
Ala Thr Pro Gly Val Asp Ser Ile Ser Gly Asp Leu Gln Pro Asp
2540 2545 2550
Thr Gly Glu Pro Phe Glu Met Ile Ser Ser Ser Val Asn Val Leu
2555 2560 2565
Gly Gln Gln Thr Leu Thr Phe Glu Val Pro Ser Gly His Gln Leu
2570 2575 2580
Ala Asp Ser Cys Ser Asp Glu Glu Pro Ala Glu Ile Leu Glu Phe
2585 2590 2595
Pro Pro Asp Asp Ser Gln Glu Ala Thr Thr Pro Leu Ala Asp Glu
2600 2605 2610
Gly Arg Ala Pro Lys Asp Lys Pro Glu Ser Lys Lys Ser Gly Leu
2615 2620 2625
Leu Trp Phe Trp Leu Pro Asn Ile Gly Phe Ser Ser Ser Val Asp
2630 2635 2640
Glu Thr Gly Val Asp Ser Lys Asn Asp Val Gln Arg Ser Ala Pro
2645 2650 2655
Ile Gln Thr Gln Pro Glu Ala Arg Pro Glu Ala Glu Leu Pro Lys
2660 2665 2670
Lys Gln Glu Lys Ala Gly Trp Phe Arg Phe Pro Lys Leu Gly Phe
2675 2680 2685
Ser Ser Ser Pro Thr Lys Lys Ser Lys Ser Thr Glu Asp Gly Ala
2690 2695 2700
Glu Leu Glu Glu Gln Lys Leu Gln Glu Glu Thr Ile Thr Phe Phe
2705 2710 2715
Asp Ala Arg Glu Ser Phe Ser Pro Glu Glu Lys Glu Glu Gly Glu
2720 2725 2730
Leu Ile Gly Pro Val Gly Thr Gly Leu Asp Ser Arg Val Met Val
2735 2740 2745
Thr Ser Ala Ala Arg Thr Glu Leu Ile Leu Pro Glu Gln Asp Arg
2750 2755 2760
Lys Ala Asp Asp Glu Ser Lys Gly Ser Gly Leu Gly Pro Asn Glu
2765 2770 2775
Gly

<210> 272
<211> 512

<212> PRT
<213> Homo sapiens
<400> 272

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Met Asp Phe Glu Ser Gly Gln Val Asp Pro Leu Ala Ser Val Ile Leu
1               5                  10                  15
Pro Pro Asn Leu Leu Glu Asn Leu Ser Pro Glu Asp Ser Val Leu Val
            20                  25                  30
Arg Arg Ala Gln Phe Thr Phe Phe Asn Lys Thr Gly Leu Phe Gln Asp
        35                  40                  45
Val Gly Pro Gln Arg Lys Thr Leu Val Ser Tyr Val Met Ala Cys Ser
    50                  55                  60
Ile Gly Asn Ile Thr Ile Gln Asn Leu Lys Asp Pro Val Gln Ile Lys
65                  70                  75                  80
Ile Lys His Thr Arg Thr Gln Glu Val His His Pro Ile Cys Ala Phe
                85                  90                  95
Trp Asp Leu Asn Lys Asn Lys Ser Phe Gly Gly Trp Asn Thr Ser Gly
            100                 105                 110
Cys Val Ala His Arg Asp Ser Asp Ala Ser Glu Thr Val Cys Leu Cys
        115                 120                 125
Asn His Phe Thr His Phe Gly Val Leu Met Asp Leu Pro Arg Ser Ala
    130                 135                 140
Ser Gln Leu Asp Ala Arg Asn Thr Lys Val Leu Thr Phe Ile Ser Tyr
145                 150                 155                 160
Ile Gly Cys Gly Ile Ser Ala Ile Phe Ser Ala Ala Thr Leu Leu Thr
                165                 170                 175
Tyr Val Ala Phe Glu Lys Leu Arg Arg Asp Tyr Pro Ser Lys Ile Leu
            180                 185                 190
Met Asn Leu Ser Thr Ala Leu Leu Phe Leu Asn Leu Leu Phe Leu Leu
        195                 200                 205
Asp Gly Trp Ile Thr Ser Phe Asn Val Asp Gly Leu Cys Ile Ala Val
    210                 215                 220
Ala Val Leu Leu His Phe Phe Leu Leu Ala Thr Phe Thr Trp Met Gly
225                 230                 235                 240
Leu Glu Ala Ile His Met Tyr Ile Ala Leu Val Lys Val Phe Asn Thr
                245                 250                 255
Tyr Ile Arg Arg Tyr Ile Leu Lys Phe Cys Ile Ile Gly Trp Gly Leu
            260                 265                 270
Pro Ala Leu Val Val Ser Val Val Leu Ala Ser Arg Asn Asn Asn Glu
        275                 280                 285
Val Tyr Gly Lys Glu Ser Tyr Gly Lys Glu Lys Gly Asp Glu Phe Cys
    290                 295                 300
Trp Ile Gln Asp Pro Val Ile Phe Tyr Val Thr Cys Ala Gly Tyr Phe
305                 310                 315                 320
Gly Val Met Phe Phe Leu Asn Ile Ala Met Phe Ile Val Val Met Val
                325                 330                 335
Gln Ile Cys Gly Arg Asn Gly Lys Arg Ser Asn Arg Thr Leu Arg Glu
            340                 345                 350
Glu Val Leu Arg Asn Leu Arg Ser Val Val Ser Leu Thr Phe Leu Leu
        355                 360                 365
Gly Met Thr Trp Gly Phe Ala Phe Phe Ala Trp Gly Pro Leu Asn Ile
    370                 375                 380
Pro Phe Met Tyr Leu Phe Ser Ile Phe Asn Ser Leu Gln Gly Leu Phe
385                 390                 395                 400
Ile Phe Ile Phe His Cys Ala Met Lys Glu Asn Val Gln Lys Gln Trp
                405                 410                 415
Arg Arg His Leu Cys Cys Gly Arg Phe Arg Leu Ala Asp Asn Ser Asp
            420                 425                 430
Trp Ser Lys Thr Ala Thr Asn Ile Ile Lys Lys Ser Ser Asp Asn Leu
        435                 440                 445
Gly Lys Ser Leu Ser Ser Ser Ser Ile Gly Ser Asn Ser Thr Tyr Leu
    450                 455                 460
Thr Ser Lys Ser Lys Ser Ser Ser Thr Thr Tyr Phe Lys Arg Asn Ser
465                 470                 475                 480
His Thr Asp Asn Val Ser Tyr Glu His Ser Phe Asn Lys Ser Gly Ser
                485                 490                 495
Leu Arg Gln Cys Phe His Gly Gln Val Leu Val Lys Thr Gly Pro Cys
            500                 505                 510
```

<210> 273

<211> 355
<212> PRT
<213> Homo sapiens
<400> 273
Met Ala Ala Pro Ala Phe Glu Pro Gly Arg Gln Ser Asp Leu Leu Val
1 5 10 15
Lys Leu Asn Arg Leu Met Glu Arg Cys Leu Arg Asn Ser Lys Cys Ile
20 25 30
Asp Thr Glu Ser Leu Cys Val Val Ala Gly Glu Lys Val Trp Gln Ile
35 40 45
Arg Val Asp Leu His Leu Leu Asn His Asp Gly Asn Ile Ile Asp Ala
50 55 60
Ala Ser Ile Ala Ala Ile Val Ala Leu Cys His Phe Arg Arg Pro Asp
65 70 75 80
Val Ser Val Gln Gly Asp Glu Val Thr Leu Tyr Thr Pro Glu Glu Arg
85 90 95
Asp Pro Val Pro Leu Ser Ile His His Met Pro Ile Cys Val Ser Phe
100 105 110
Ala Phe Phe Gln Gln Gly Thr Tyr Leu Leu Val Asp Pro Asn Glu Arg
115 120 125
Glu Glu Arg Val Met Asp Gly Leu Leu Val Ile Ala Met Asn Lys His
130 135 140
Arg Glu Ile Cys Thr Ile Gln Ser Ser Gly Gly Ile Met Leu Leu Lys
145 150 155 160
Asp Gln Val Leu Arg Cys Ser Lys Ile Ala Gly Val Lys Val Ala Glu
165 170 175
Ile Thr Glu Leu Ile Leu Lys Ala Leu Glu Asn Asp Gln Lys Val Arg
180 185 190
Lys Glu Gly Gly Lys Phe Gly Phe Ala Glu Ser Ile Ala Asn Gln Arg
195 200 205
Ile Thr Ala Phe Lys Met Glu Lys Ala Pro Ile Asp Thr Ser Asp Val
210 215 220
Glu Glu Lys Ala Glu Glu Ile Ile Ala Glu Ala Glu Pro Pro Ser Glu
225 230 235 240
Val Val Ser Thr Pro Val Leu Trp Thr Pro Gly Thr Ala Gln Ile Gly
245 250 255
Glu Gly Val Glu Asn Ser Trp Gly Asp Leu Glu Asp Ser Glu Lys Glu
260 265 270
Asp Asp Glu Gly Gly Gly Asp Gln Ala Ile Ile Leu Asp Gly Ile Lys
275 280 285
Met Asp Thr Gly Val Glu Val Ser Asp Ile Gly Ser Gln Asp Ala Pro
290 295 300
Ile Ile Leu Ser Asp Ser Glu Glu Glu Glu Met Ile Ile Leu Glu Pro
305 310 315 320
Asp Lys Asn Pro Lys Lys Ile Arg Thr Gln Thr Thr Ser Ala Lys Gln
325 330 335
Glu Lys Ala Pro Ser Lys Lys Pro Val Lys Arg Arg Lys Lys Lys Arg
340 345 350
Ala Ala Asn
355

<210> 274
<211> 940
<212> PRT
<213> Homo sapiens
<400> 274
Met Ile Leu Glu Gln Tyr Val Val Val Ser Asn Tyr Lys Lys Gln Glu
1 5 10 15
Asn Ser Glu Leu Ser Leu Gln Ala Gly Glu Val Val Asp Val Ile Glu
20 25 30
Lys Asn Glu Ser Gly Trp Trp Phe Val Ser Thr Ser Glu Glu Gln Gly
35 40 45
Trp Val Pro Ala Thr Tyr Leu Glu Ala Gln Asn Gly Thr Arg Asp Asp
50 55 60
Ser Asp Ile Asn Thr Ser Lys Thr Gly Glu Glu Glu Lys Tyr Val Thr
65 70 75 80
Val Gln Pro Tyr Thr Ser Gln Ser Lys Asp Glu Ile Gly Phe Glu Lys
85 90 95
Gly Val Thr Val Glu Val Ile Arg Lys Asn Leu Glu Gly Trp Trp Tyr

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                100                 105                 110
Ile Arg Tyr Leu Gly Lys Glu Gly Trp Ala Pro Ala Ser Tyr Leu Lys
            115                 120                 125
Lys Ala Lys Asp Asp Leu Pro Thr Arg Lys Lys Asn Leu Ala Gly Pro
        130                 135                 140
Val Glu Ile Ile Gly Asn Ile Met Glu Ile Ser Asn Leu Leu Asn Lys
145                 150                 155                 160
Lys Ala Ser Gly Asp Lys Glu Thr Pro Pro Ala Glu Gly Glu Gly His
                165                 170                 175
Glu Ala Pro Ile Ala Lys Lys Glu Ile Ser Leu Pro Ile Leu Cys Asn
            180                 185                 190
Ala Ser Asn Gly Ser Ala Val Gly Val Pro Asp Arg Thr Val Ser Arg
        195                 200                 205
Leu Ala Gln Gly Ser Pro Ala Val Ala Arg Ile Ala Pro Gln Arg Ala
    210                 215                 220
Gln Ile Ser Ser Pro Asn Leu Arg Thr Arg Pro Pro Pro Arg Arg Glu
225                 230                 235                 240
Ser Ser Leu Gly Phe Gln Leu Pro Lys Pro Pro Glu Pro Pro Ser Val
                245                 250                 255
Glu Val Glu Tyr Tyr Thr Ile Ala Glu Phe Gln Ser Cys Ile Ser Asp
            260                 265                 270
Gly Ile Ser Phe Arg Gly Gly Gln Lys Ala Glu Val Ile Asp Lys Asn
        275                 280                 285
Ser Gly Gly Trp Trp Tyr Val Gln Ile Gly Glu Lys Glu Gly Trp Ala
    290                 295                 300
Pro Ala Ser Tyr Ile Asp Lys Arg Lys Lys Pro Asn Leu Ser Arg Arg
305                 310                 315                 320
Thr Ser Thr Leu Thr Arg Pro Lys Val Pro Pro Pro Ala Pro Pro Ser
                325                 330                 335
Lys Pro Lys Glu Ala Glu Glu Gly Pro Thr Gly Ala Ser Glu Ser Gln
            340                 345                 350
Asp Ser Pro Arg Lys Leu Lys Tyr Glu Glu Pro Glu Tyr Asp Ile Pro
        355                 360                 365
Ala Phe Gly Phe Asp Ser Glu Pro Glu Leu Ser Glu Glu Pro Val Glu
    370                 375                 380
Asp Arg Ala Ser Gly Glu Arg Arg Pro Ala Gln Pro His Arg Pro Ser
385                 390                 395                 400
Pro Ala Ser Ser Leu Gln Arg Ala Arg Phe Lys Val Gly Glu Ser Ser
                405                 410                 415
Glu Asp Val Ala Leu Glu Glu Glu Thr Ile Tyr Glu Asn Glu Gly Phe
            420                 425                 430
Arg Pro Tyr Ala Glu Asp Thr Leu Ser Ala Arg Gly Ser Ser Gly Asp
        435                 440                 445
Ser Asp Ser Pro Gly Ser Ser Ser Leu Ser Leu Thr Arg Lys Asn Ser
    450                 455                 460
Pro Lys Ser Gly Ser Pro Lys Ser Ser Ser Leu Leu Lys Leu Lys Ala
465                 470                 475                 480
Glu Lys Asn Ala Gln Ala Glu Met Gly Lys Asn His Ser Ser Ala Ser
                485                 490                 495
Phe Ser Ser Ser Ile Thr Ile Asn Thr Thr Cys Cys Ser Ser Ser Ser
            500                 505                 510
Ser Ser Ser Ser Ser Leu Ser Lys Thr Ser Gly Asp Leu Lys Pro Arg
        515                 520                 525
Ser Ala Ser Asp Ala Gly Ile Arg Gly Thr Pro Lys Val Arg Ala Lys
    530                 535                 540
Lys Asp Ala Asp Ala Asn Ala Gly Leu Thr Ser Cys Pro Arg Ala Lys
545                 550                 555                 560
Pro Ser Val Arg Pro Lys Pro Phe Leu Asn Arg Ala Glu Ser Gln Ser
                565                 570                 575
Gln Glu Lys Met Asp Ile Ser Thr Leu Arg Arg Gln Leu Arg Pro Thr
            580                 585                 590
Gly Gln Leu Arg Gly Gly Leu Lys Gly Ser Lys Ser Glu Asp Ser Glu
        595                 600                 605
Leu Pro Pro Gln Thr Ala Ser Glu Ala Pro Ser Glu Gly Ser Arg Arg
    610                 615                 620
Ser Ser Ser Asp Leu Ile Thr Leu Pro Ala Thr Thr Pro Pro Cys Pro
625                 630                 635                 640
Thr Lys Lys Glu Trp Glu Gly Pro Ala Thr Ser Tyr Met Thr Cys Ser
                645                 650                 655
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Ala Tyr Gln Lys Val Gln Asp Ser Glu Ile Ser Phe Pro Ala Gly Val
            660                 665                 670
Glu Val Gln Val Leu Glu Lys Gln Glu Ser Gly Trp Trp Tyr Val Arg
        675                 680                 685
Phe Gly Glu Leu Glu Gly Trp Ala Pro Ser His Tyr Leu Val Leu Asp
    690                 695                 700
Glu Asn Glu Gln Pro Asp Pro Ser Gly Lys Glu Leu Asp Thr Val Pro
705                 710                 715                 720
Ala Lys Gly Arg Gln Asn Glu Gly Lys Ser Asp Ser Leu Glu Lys Ile
                725                 730                 735
Glu Arg Arg Val Gln Ala Leu Asn Thr Val Asn Gln Ser Lys Lys Ala
            740                 745                 750
Thr Pro Pro Ile Pro Ser Lys Pro Pro Gly Gly Phe Gly Lys Thr Ser
        755                 760                 765
Gly Thr Pro Ala Val Lys Met Arg Asn Gly Val Arg Gln Val Ala Val
    770                 775                 780
Arg Pro Gln Ser Val Phe Val Ser Pro Pro Pro Lys Asp Asn Asn Leu
785                 790                 795                 800
Ser Cys Ala Leu Arg Arg Asn Glu Ser Leu Thr Ala Thr Asp Gly Leu
                805                 810                 815
Arg Gly Val Arg Arg Asn Ser Ser Phe Ser Thr Ala Arg Ser Ala Ala
            820                 825                 830
Ala Glu Ala Lys Gly Arg Leu Ala Glu Arg Ala Ala Ser Gln Gly Ser
        835                 840                 845
Asp Ser Pro Leu Leu Pro Ala Gln Arg Asn Ser Ile Pro Val Ser Pro
    850                 855                 860
Val Arg Pro Lys Pro Ile Glu Lys Ser Gln Phe Ile His Asn Asn Leu
865                 870                 875                 880
Lys Asp Val Tyr Val Ser Ile Ala Asp Tyr Glu Gly Asp Glu Glu Thr
                885                 890                 895
Ala Gly Phe Gln Glu Gly Val Ser Met Glu Val Leu Glu Arg Asn Pro
            900                 905                 910
Asn Gly Trp Trp Tyr Cys Gln Ile Leu Asp Gly Val Lys Pro Phe Lys
        915                 920                 925
Gly Trp Val Pro Ser Asn Tyr Leu Glu Lys Lys Asn
    930                 935                 940
```

<210> 275
<211> 871
<212> PRT
<213> Homo sapiens
<400> 275

```
Met Lys Tyr Ser Cys Cys Ala Leu Val Leu Ala Val Leu Gly Thr Glu
1               5                  10                  15
Leu Leu Gly Ser Leu Cys Ser Thr Val Arg Ser Pro Arg Phe Arg Gly
            20                  25                  30
Arg Ile Gln Gln Glu Arg Lys Asn Ile Arg Pro Asn Ile Ile Leu Val
        35                  40                  45
Pro Thr Asp Asp Gln Asp Val Glu Leu Gly Ser Leu Gln Val Met Asn
    50                  55                  60
Lys Thr Arg Lys Ile Met Glu His Gly Gly Ala Thr Phe Ile Asn Ala
65                  70                  75                  80
Phe Val Thr Thr Pro Met Cys Cys Pro Ser Arg Ser Ser Met Leu Thr
                85                  90                  95
Gly Lys Tyr Val His Asn His Asn Val Tyr Thr Asn Asn Glu Asn Cys
            100                 105                 110
Ser Ser Pro Ser Trp Gln Ala Met His Glu Pro Arg Thr Phe Ala Val
        115                 120                 125
Tyr Leu Asn Asn Thr Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu
    130                 135                 140
Asn Glu Tyr Asn Gly Ser Tyr Ile Pro Pro Gly Trp Arg Glu Trp Leu
145                 150                 155                 160
Gly Leu Ile Lys Asn Ser Arg Phe Tyr Asn Tyr Thr Val Cys Arg Asn
                165                 170                 175
Gly Ile Lys Glu Lys His Gly Phe Asp Tyr Ala Lys Asp Tyr Phe Thr
            180                 185                 190
Asp Leu Ile Thr Asn Glu Ser Ile Asn Tyr Phe Lys Met Ser Lys Arg
        195                 200                 205
Met Tyr Pro His Arg Pro Val Met Met Val Ile Ser His Ala Ala Pro
```

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    210                 215                 220
His Gly Pro Glu Asp Ser Ala Pro Gln Phe Ser Lys Leu Tyr Pro Asn
225                 230                 235                 240
Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn Met Asp
                245                 250                 255
Lys His Trp Ile Met Gln Tyr Thr Gly Pro Met Leu Pro Ile His Met
            260                 265                 270
Glu Phe Thr Asn Ile Leu Gln Arg Lys Arg Leu Gln Thr Leu Met Ser
        275                 280                 285
Val Asp Asp Ser Val Glu Arg Leu Tyr Asn Met Leu Val Glu Thr Gly
    290                 295                 300
Glu Leu Glu Asn Thr Tyr Ile Ile Tyr Thr Ala Asp His Gly Tyr His
305                 310                 315                 320
Ile Gly Gln Phe Gly Leu Val Lys Gly Lys Ser Met Pro Tyr Asp Phe
                325                 330                 335
Asp Ile Arg Val Pro Phe Phe Ile Arg Gly Pro Ser Val Glu Pro Gly
            340                 345                 350
Ser Ile Val Pro Gln Ile Val Leu Asn Ile Asp Leu Ala Pro Thr Ile
        355                 360                 365
Leu Asp Ile Ala Gly Leu Asp Thr Pro Pro Asp Val Asp Gly Lys Ser
    370                 375                 380
Val Leu Lys Leu Leu Asp Pro Glu Lys Pro Gly Asn Arg Phe Arg Thr
385                 390                 395                 400
Asn Lys Lys Ala Lys Ile Trp Arg Asp Thr Phe Leu Val Glu Arg Gly
                405                 410                 415
Lys Phe Leu Arg Lys Lys Glu Glu Ser Ser Lys Asn Ile Gln Gln Ser
            420                 425                 430
Asn His Leu Pro Lys Tyr Glu Arg Val Lys Glu Leu Cys Gln Gln Ala
        435                 440                 445
Arg Tyr Gln Thr Ala Cys Glu Gln Pro Gly Gln Lys Trp Gln Cys Ile
    450                 455                 460
Glu Asp Thr Ser Gly Lys Leu Arg Ile His Lys Cys Lys Gly Pro Ser
465                 470                 475                 480
Asp Leu Leu Thr Val Arg Gln Ser Thr Arg Asn Leu Tyr Ala Arg Gly
                485                 490                 495
Phe His Asp Lys Asp Lys Glu Cys Ser Cys Arg Glu Ser Gly Tyr Arg
            500                 505                 510
Ala Ser Arg Ser Gln Arg Lys Ser Gln Arg Gln Phe Leu Arg Asn Gln
        515                 520                 525
Gly Thr Pro Lys Tyr Lys Pro Arg Phe Val His Thr Arg Gln Thr Arg
    530                 535                 540
Ser Leu Ser Val Glu Phe Glu Gly Glu Ile Tyr Asp Ile Asn Leu Glu
545                 550                 555                 560
Glu Glu Glu Glu Leu Gln Val Leu Gln Pro Arg Asn Ile Ala Lys Arg
                565                 570                 575
His Asp Glu Gly His Lys Gly Pro Arg Asp Leu Gln Ala Ser Ser Gly
            580                 585                 590
Gly Asn Arg Gly Arg Met Leu Ala Asp Ser Ser Asn Ala Val Gly Pro
        595                 600                 605
Pro Thr Thr Val Arg Val Thr His Lys Cys Phe Ile Leu Pro Asn Asp
    610                 615                 620
Ser Ile His Cys Glu Arg Glu Leu Tyr Gln Ser Ala Arg Ala Trp Lys
625                 630                 635                 640
Asp His Lys Ala Tyr Ile Asp Lys Glu Ile Glu Ala Leu Gln Asp Lys
                645                 650                 655
Ile Lys Asn Leu Arg Glu Val Arg Gly His Leu Lys Arg Arg Lys Pro
            660                 665                 670
Glu Glu Cys Ser Cys Ser Lys Gln Ser Tyr Tyr Asn Lys Glu Lys Gly
        675                 680                 685
Val Lys Lys Gln Glu Lys Leu Lys Ser His Leu His Pro Phe Lys Glu
    690                 695                 700
Ala Ala Gln Glu Val Asp Ser Lys Leu Gln Leu Phe Lys Glu Asn Asn
705                 710                 715                 720
Arg Arg Arg Lys Lys Glu Arg Lys Glu Lys Arg Arg Gln Arg Lys Gly
                725                 730                 735
Glu Glu Cys Ser Leu Pro Gly Leu Thr Cys Phe Thr His Asp Asn Asn
            740                 745                 750
His Trp Gln Thr Ala Pro Phe Trp Asn Leu Gly Ser Phe Cys Ala Cys
        755                 760                 765
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Thr Ser Ser Asn Asn Asn Thr Tyr Trp Cys Leu Arg Thr Val Asn Glu
    770                 775                 780
Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu Tyr
785                 790                 795                 800
Phe Asp Met Asn Thr Asp Pro Tyr Gln Leu Thr Asn Thr Val His Thr
                805                 810                 815
Val Glu Arg Gly Ile Leu Asn Gln Leu His Val Gln Leu Met Glu Leu
            820                 825                 830
Arg Ser Cys Gln Gly Tyr Lys Gln Cys Asn Pro Arg Pro Lys Asn Leu
        835                 840                 845
Asp Val Gly Asn Lys Asp Gly Gly Ser Tyr Asp Leu His Arg Gly Gln
    850                 855                 860
Leu Trp Asp Gly Trp Glu Gly
865                 870

<210>  276
<211>  1426
<212>  PRT
<213>  Homo sapiens
<400>  276
Met Asn Asp Trp His Arg Ile Phe Thr Gln Asn Val Leu Val Pro Pro
1               5                   10                  15
His Pro Gln Arg Ala Arg Gln Pro Trp Lys Glu Ser Thr Ala Phe Gln
            20                  25                  30
Cys Val Leu Lys Trp Leu Asp Gly Pro Val Ile Arg Gln Gly Val Leu
        35                  40                  45
Glu Val Leu Ser Glu Val Glu Cys His Leu Arg Val Ser Phe Phe Asp
    50                  55                  60
Val Thr Tyr Arg His Phe Phe Gly Arg Thr Trp Lys Thr Thr Val Lys
65                  70                  75                  80
Pro Thr Lys Arg Pro Pro Ser Arg Ile Val Phe Asn Glu Pro Leu Tyr
                85                  90                  95
Phe His Thr Ser Leu Asn His Pro His Ile Val Ala Val Val Glu Val
            100                 105                 110
Val Ala Glu Gly Lys Lys Arg Asp Gly Ser Leu Gln Thr Leu Ser Cys
        115                 120                 125
Gly Phe Gly Ile Leu Arg Ile Phe Ser Asn Gln Pro Asp Ser Pro Ile
    130                 135                 140
Ser Ala Ser Gln Asp Lys Arg Leu Arg Leu Tyr His Gly Thr Pro Arg
145                 150                 155                 160
Ala Leu Leu His Pro Leu Leu Gln Asp Pro Ala Glu Gln Asn Arg His
                165                 170                 175
Met Thr Leu Ile Glu Asn Cys Ser Leu Gln Tyr Thr Leu Lys Pro His
            180                 185                 190
Pro Ala Leu Glu Pro Ala Phe His Leu Leu Pro Glu Asn Leu Leu Val
        195                 200                 205
Ser Gly Leu Gln Gln Ile Pro Gly Leu Leu Pro Ala His Gly Glu Ser
    210                 215                 220
Gly Asp Ala Leu Arg Lys Pro Arg Leu Gln Lys Pro Ile Thr Gly His
225                 230                 235                 240
Leu Asp Asp Leu Phe Phe Thr Leu Tyr Pro Ser Leu Glu Lys Phe Glu
                245                 250                 255
Glu Glu Leu Leu Glu Leu His Val Gln Asp His Phe Gln Glu Gly Cys
            260                 265                 270
Gly Pro Leu Asp Gly Gly Ala Leu Glu Ile Leu Glu Arg Arg Leu Arg
        275                 280                 285
Val Gly Val His Asn Gly Leu Gly Phe Val Gln Arg Pro Gln Val Val
    290                 295                 300
Val Leu Val Pro Glu Met Asp Val Ala Leu Thr Arg Ser Ala Ser Phe
305                 310                 315                 320
Ser Arg Lys Val Val Ser Ser Ser Lys Thr Ser Ser Gly Ser Gln Ala
                325                 330                 335
Leu Val Leu Arg Ser Arg Leu Arg Leu Pro Glu Met Val Gly His Pro
            340                 345                 350
Ala Phe Ala Val Ile Phe Gln Leu Glu Tyr Val Phe Ser Ser Pro Ala
        355                 360                 365
Gly Val Asp Gly Asn Ala Ala Ser Val Thr Ser Leu Ser Asn Leu Ala
    370                 375                 380
Cys Met His Met Val Arg Trp Ala Val Trp Asn Pro Leu Leu Glu Ala
```

385 390 395 400
Asp Ser Gly Arg Val Thr Leu Pro Leu Gln Gly Gly Ile Gln Pro Asn
405 410 415
Pro Ser His Cys Leu Val Tyr Lys Val Pro Ser Ala Ser Met Ser Ser
420 425 430
Glu Glu Val Lys Gln Val Glu Ser Gly Thr Leu Arg Phe Gln Phe Ser
435 440 445
Leu Gly Ser Glu Glu His Leu Asp Ala Pro Thr Glu Pro Val Ser Gly
450 455 460
Pro Lys Val Glu Arg Arg Pro Ser Arg Lys Pro Pro Thr Ser Pro Ser
465 470 475 480
Ser Pro Pro Ala Pro Val Pro Arg Val Leu Ala Ala Pro Gln Asn Ser
485 490 495
Pro Val Gly Pro Gly Leu Ser Ile Ser Gln Leu Ala Ala Ser Pro Arg
500 505 510
Ser Pro Thr Gln His Cys Leu Ala Arg Pro Thr Ser Gln Leu Pro His
515 520 525
Gly Ser Gln Ala Ser Pro Ala Gln Ala Gln Glu Phe Pro Leu Glu Ala
530 535 540
Gly Ile Ser His Leu Glu Ala Asp Leu Ser Gln Thr Ser Leu Val Leu
545 550 555 560
Glu Thr Ser Ile Ala Glu Gln Leu Gln Glu Leu Pro Phe Thr Pro Leu
565 570 575
His Ala Pro Ile Val Val Gly Thr Gln Thr Arg Ser Ser Ala Gly Gln
580 585 590
Pro Ser Arg Ala Ser Met Val Leu Leu Gln Ser Ser Gly Phe Pro Glu
595 600 605
Ile Leu Asp Ala Asn Lys Gln Pro Ala Glu Ala Val Ser Ala Thr Glu
610 615 620
Pro Val Thr Phe Asn Pro Gln Lys Glu Glu Ser Asp Cys Leu Gln Ser
625 630 635 640
Asn Glu Met Val Leu Gln Phe Leu Ala Phe Ser Arg Val Ala Gln Asp
645 650 655
Cys Arg Gly Thr Ser Trp Pro Lys Thr Val Tyr Phe Thr Phe Gln Phe
660 665 670
Tyr Arg Phe Pro Pro Ala Thr Thr Pro Arg Leu Gln Leu Val Gln Leu
675 680 685
Asp Glu Ala Gly Gln Pro Ser Ser Gly Ala Leu Thr His Ile Leu Val
690 695 700
Pro Val Ser Arg Asp Gly Thr Phe Asp Ala Gly Ser Pro Gly Phe Gln
705 710 715 720
Leu Arg Tyr Met Val Gly Pro Gly Phe Leu Lys Pro Gly Glu Arg Arg
725 730 735
Cys Phe Ala Arg Tyr Leu Ala Val Gln Thr Leu Gln Ile Asp Val Trp
740 745 750
Asp Gly Asp Ser Leu Leu Leu Ile Gly Ser Ala Ala Val Gln Met Lys
755 760 765
His Leu Leu Arg Gln Gly Arg Pro Ala Val Gln Ala Ser His Glu Leu
770 775 780
Glu Val Val Ala Thr Glu Tyr Glu Gln Asp Asn Met Val Val Ser Gly
785 790 795 800
Asp Met Leu Gly Phe Gly Arg Val Lys Pro Ile Gly Val His Ser Val
805 810 815
Val Lys Gly Arg Leu His Leu Thr Leu Ala Asn Val Gly His Pro Cys
820 825 830
Glu Gln Lys Val Arg Gly Cys Ser Thr Leu Pro Pro Ser Arg Ser Arg
835 840 845
Val Ile Ser Asn Asp Gly Ala Ser Arg Phe Ser Gly Gly Ser Leu Leu
850 855 860
Thr Thr Gly Ser Ser Arg Arg Lys His Val Val Gln Ala Gln Lys Leu
865 870 875 880
Ala Asp Val Asp Ser Glu Leu Ala Ala Met Leu Leu Thr His Ala Arg
885 890 895
Gln Gly Lys Gly Pro Gln Asp Val Ser Arg Glu Ser Asp Ala Thr Arg
900 905 910
Arg Arg Lys Leu Glu Arg Met Arg Ser Val Arg Leu Gln Glu Ala Gly
915 920 925
Gly Asp Leu Gly Arg Arg Gly Thr Ser Val Leu Ala Gln Gln Ser Val
930 935 940

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Arg Thr Gln His Leu Arg Asp Leu Gln Val Ile Ala Ala Tyr Arg Glu
945                 950                 955                 960
Arg Thr Lys Ala Glu Ser Ile Ala Ser Leu Leu Ser Leu Ala Ile Thr
                965                 970                 975
Thr Glu His Thr Leu His Ala Thr Leu Gly Val Ala Glu Phe Phe Glu
            980                 985                 990
Phe Val Leu Lys Asn Pro His Asn Thr Gln His Thr Val Thr Val Glu
        995                1000                1005
Ile Asp Asn Pro Glu Leu Ser Val Ile Val Asp Ser Gln Glu Trp
    1010                1015                1020
Arg Asp Phe Lys Gly Ala Ala Gly Leu His Thr Pro Val Glu Glu
    1025                1030                1035
Asp Met Phe His Leu Arg Gly Ser Leu Ala Pro Gln Leu Tyr Leu
    1040                1045                1050
Arg Pro His Glu Thr Ala His Val Pro Phe Lys Phe Gln Ser Phe
    1055                1060                1065
Ser Ala Gly Gln Leu Ala Met Val Gln Ala Ser Pro Gly Leu Ser
    1070                1075                1080
Asn Glu Lys Gly Met Asp Ala Val Ser Pro Trp Lys Ser Ser Ala
    1085                1090                1095
Val Pro Thr Lys His Ala Lys Val Leu Phe Arg Ala Ser Gly Gly
    1100                1105                1110
Lys Pro Ile Ala Val Leu Cys Leu Thr Val Glu Leu Gln Pro His
    1115                1120                1125
Val Val Asp Gln Val Phe Arg Phe Tyr His Pro Glu Leu Ser Phe
    1130                1135                1140
Leu Lys Lys Ala Ile Arg Leu Pro Pro Trp His Thr Phe Pro Gly
    1145                1150                1155
Ala Pro Val Gly Met Leu Gly Glu Asp Pro Pro Val His Val Arg
    1160                1165                1170
Cys Ser Asp Pro Asn Val Ile Cys Glu Thr Gln Asn Val Gly Pro
    1175                1180                1185
Gly Glu Pro Arg Asp Ile Phe Leu Lys Val Ala Ser Gly Pro Ser
    1190                1195                1200
Pro Glu Ile Lys Asp Phe Phe Val Ile Ile Tyr Ser Asp Arg Trp
    1205                1210                1215
Leu Ala Thr Pro Thr Gln Thr Trp Gln Val Tyr Leu His Ser Leu
    1220                1225                1230
Gln Arg Val Asp Val Ser Cys Val Ala Gly Gln Leu Thr Arg Leu
    1235                1240                1245
Ser Leu Val Leu Arg Gly Thr Gln Thr Val Arg Lys Val Arg Ala
    1250                1255                1260
Phe Thr Ser His Pro Gln Glu Leu Lys Thr Asp Pro Lys Gly Val
    1265                1270                1275
Phe Val Leu Pro Pro Arg Gly Val Gln Asp Leu His Val Gly Val
    1280                1285                1290
Arg Pro Leu Arg Ala Gly Ser Arg Phe Val His Leu Asn Leu Val
    1295                1300                1305
Asp Val Asp Cys His Gln Leu Val Ala Ser Trp Leu Val Cys Leu
    1310                1315                1320
Cys Cys Arg Gln Pro Leu Ile Ser Lys Ala Phe Glu Ile Met Leu
    1325                1330                1335
Ala Ala Gly Glu Gly Lys Gly Val Asn Lys Arg Ile Thr Tyr Thr
    1340                1345                1350
Asn Pro Tyr Pro Ser Arg Arg Thr Phe His Leu His Ser Asp His
    1355                1360                1365
Pro Glu Leu Leu Arg Phe Arg Glu Asp Ser Phe Gln Val Gly Gly
    1370                1375                1380
Gly Glu Thr Tyr Thr Ile Gly Leu Gln Phe Ala Pro Ser Gln Arg
    1385                1390                1395
Val Gly Glu Glu Glu Ile Leu Ile Tyr Ile Asn Asp His Glu Asp
    1400                1405                1410
Lys Asn Glu Glu Ala Phe Cys Val Lys Val Ile Tyr Gln
    1415                1420                1425
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<210> 277
<211> 146
<212> PRT
<213> Homo sapiens

<400> 277
Met Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly
1 5 10 15
Val Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile
20 25 30
Val Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys
35 40 45
Leu Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu
50 55 60
Gly Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn
65 70 75 80
Phe Val Asp Ile Val Asp Ala Lys Leu Lys Ile Pro Val Ser Gly Ser
85 90 95
Lys Ser Glu Gly Leu Leu Tyr Val His Ser Ser Arg Gly Gly Pro Phe
100 105 110
Gln Arg Trp His Leu Asp Glu Val Phe Leu Glu Leu Lys Asp Gly Gln
115 120 125
Gln Ile Pro Val Phe Lys Leu Ser Gly Glu Asn Gly Asp Glu Val Lys
130 135 140
Lys Glu
145

<210> 278
<211> 402
<212> PRT
<213> Homo sapiens
<400> 278
Met Lys Glu Thr Arg Gly Tyr Gly Gly Asp Ala Pro Phe Cys Thr Arg
1 5 10 15
Leu Asn His Ser Tyr Thr Gly Met Trp Ala Pro Glu Arg Ser Ala Glu
20 25 30
Ala Arg Gly Asn Leu Thr Arg Pro Pro Gly Ser Gly Glu Asp Cys Gly
35 40 45
Ser Val Ser Val Ala Phe Pro Ile Thr Met Leu Leu Thr Gly Phe Val
50 55 60
Gly Asn Ala Leu Ala Met Leu Leu Val Ser Arg Ser Tyr Arg Arg Arg
65 70 75 80
Glu Ser Lys Arg Lys Lys Ser Phe Leu Leu Cys Ile Gly Trp Leu Ala
85 90 95
Leu Thr Asp Leu Val Gly Gln Leu Leu Thr Thr Pro Val Val Ile Val
100 105 110
Val Tyr Leu Ser Lys Gln Arg Trp Glu His Ile Asp Pro Ser Gly Arg
115 120 125
Leu Cys Thr Phe Phe Gly Leu Thr Met Thr Val Phe Gly Leu Ser Ser
130 135 140
Leu Phe Ile Ala Ser Ala Met Ala Val Glu Arg Ala Leu Ala Ile Arg
145 150 155 160
Ala Pro His Trp Tyr Ala Ser His Met Lys Thr Arg Ala Thr Arg Ala
165 170 175
Val Leu Leu Gly Val Trp Leu Ala Val Leu Ala Phe Ala Leu Leu Pro
180 185 190
Val Leu Gly Val Gly Gln Tyr Thr Val Gln Trp Pro Gly Thr Trp Cys
195 200 205
Phe Ile Ser Thr Gly Arg Gly Gly Asn Gly Thr Ser Ser Ser His Asn
210 215 220
Trp Gly Asn Leu Phe Phe Ala Ser Ala Phe Ala Phe Leu Gly Leu Leu
225 230 235 240
Ala Leu Thr Val Thr Phe Ser Cys Asn Leu Ala Thr Ile Lys Ala Leu
245 250 255
Val Ser Arg Cys Arg Ala Lys Ala Thr Ala Ser Gln Ser Ser Ala Gln
260 265 270
Trp Gly Arg Ile Thr Thr Glu Thr Ala Ile Gln Leu Met Gly Ile Met
275 280 285
Cys Val Leu Ser Val Cys Trp Ser Pro Leu Leu Ile Met Met Leu Lys
290 295 300
Met Ile Phe Asn Gln Thr Ser Val Glu His Cys Lys Thr His Thr Glu
305 310 315 320
Lys Gln Lys Glu Cys Asn Phe Phe Leu Ile Ala Val Arg Leu Ala Ser
325 330 335

```
Leu Asn Gln Ile Leu Asp Pro Trp Val Tyr Leu Leu Leu Arg Lys Ile
            340                 345                 350
Leu Leu Arg Lys Phe Cys Gln Met Arg Lys Arg Arg Leu Arg Glu Gln
        355                 360                 365
Glu Met Gly Pro Asp Gly Arg Cys Phe Cys His Ala Trp Arg Gln Val
    370                 375                 380
Pro Arg Thr Trp Cys Ser Ser His Asp Arg Glu Pro Cys Ser Val Gln
385                 390                 395                 400
Leu Ser
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<210> 279
<211> 1741
<212> PRT
<213> Homo sapiens
<400> 279

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Met Arg Leu Leu Trp Gly Leu Ile Trp Ala Ser Ser Phe Phe Thr Leu
1               5                  10                  15
Ser Leu Gln Lys Pro Arg Leu Leu Leu Phe Ser Pro Ser Val Val His
            20                  25                  30
Leu Gly Val Pro Leu Ser Val Gly Val Gln Leu Gln Asp Val Pro Arg
        35                  40                  45
Gly Gln Val Val Lys Gly Ser Val Phe Leu Arg Asn Pro Ser Arg Asn
    50                  55                  60
Asn Val Pro Cys Ser Pro Lys Val Asp Phe Thr Leu Ser Ser Glu Arg
65                  70                  75                  80
Asp Phe Ala Leu Leu Ser Leu Gln Val Pro Leu Lys Asp Ala Lys Ser
                85                  90                  95
Cys Gly Leu His Gln Leu Leu Arg Gly Pro Glu Val Gln Leu Val Ala
            100                 105                 110
His Ser Pro Trp Leu Lys Asp Ser Leu Ser Arg Thr Thr Asn Ile Gln
        115                 120                 125
Gly Ile Asn Leu Leu Phe Ser Ser Arg Arg Gly His Leu Phe Leu Gln
    130                 135                 140
Thr Asp Gln Pro Ile Tyr Asn Pro Gly Gln Arg Val Arg Tyr Arg Val
145                 150                 155                 160
Phe Ala Leu Asp Gln Lys Met Arg Pro Ser Thr Asp Thr Ile Thr Val
                165                 170                 175
Met Val Glu Asn Ser His Gly Leu Arg Val Arg Lys Lys Glu Val Tyr
            180                 185                 190
Met Pro Ser Ser Ile Phe Gln Asp Asp Phe Val Ile Pro Asp Ile Ser
        195                 200                 205
Glu Pro Gly Thr Trp Lys Ile Ser Ala Arg Phe Ser Asp Gly Leu Glu
    210                 215                 220
Ser Asn Ser Ser Thr Gln Phe Glu Val Lys Lys Tyr Val Leu Pro Asn
225                 230                 235                 240
Phe Glu Val Lys Ile Thr Pro Gly Lys Pro Tyr Ile Leu Thr Val Pro
                245                 250                 255
Gly His Leu Asp Glu Met Gln Leu Asp Ile Gln Ala Arg Tyr Ile Tyr
            260                 265                 270
Gly Lys Pro Val Gln Gly Val Ala Tyr Val Arg Phe Gly Leu Leu Asp
        275                 280                 285
Glu Asp Gly Lys Lys Thr Phe Phe Arg Gly Leu Glu Ser Gln Thr Lys
    290                 295                 300
Leu Val Asn Gly Gln Ser His Ile Ser Leu Ser Lys Ala Glu Phe Gln
305                 310                 315                 320
Asp Ala Leu Glu Lys Leu Asn Met Gly Ile Thr Asp Leu Gln Gly Leu
                325                 330                 335
Arg Leu Tyr Val Ala Ala Ala Ile Ile Glu Ser Pro Gly Gly Glu Met
            340                 345                 350
Glu Glu Ala Glu Leu Thr Ser Trp Tyr Phe Val Ser Ser Pro Phe Ser
        355                 360                 365
Leu Asp Leu Ser Lys Thr Lys Arg His Leu Val Pro Gly Ala Pro Phe
    370                 375                 380
Leu Leu Gln Ala Leu Val Arg Glu Met Ser Gly Ser Pro Ala Ser Gly
385                 390                 395                 400
Ile Pro Val Lys Val Ser Ala Thr Val Ser Ser Pro Gly Ser Val Pro
                405                 410                 415
Glu Ala Gln Asp Ile Gln Gln Asn Thr Asp Gly Ser Gly Gln Val Ser
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                420                 425                 430
Ile Pro Ile Ile Ile Pro Gln Thr Ile Ser Glu Leu Gln Leu Ser Val
        435                 440                 445
Ser Ala Gly Ser Pro His Pro Ala Ile Ala Arg Leu Thr Val Ala Ala
    450                 455                 460
Pro Pro Ser Gly Gly Pro Gly Phe Leu Ser Ile Glu Arg Pro Asp Ser
465                 470                 475                 480
Arg Pro Pro Arg Val Gly Asp Thr Leu Asn Leu Asn Leu Arg Ala Val
                485                 490                 495
Gly Ser Gly Ala Thr Phe Ser His Tyr Tyr Tyr Met Ile Leu Ser Arg
            500                 505                 510
Gly Gln Ile Val Phe Met Asn Arg Glu Pro Lys Arg Thr Leu Thr Ser
        515                 520                 525
Val Ser Val Phe Val Asp His His Leu Ala Pro Ser Phe Tyr Phe Val
    530                 535                 540
Ala Phe Tyr Tyr His Gly Asp His Pro Val Ala Asn Ser Leu Arg Val
545                 550                 555                 560
Asp Val Gln Ala Gly Ala Cys Glu Gly Lys Leu Glu Leu Ser Val Asp
                565                 570                 575
Gly Ala Lys Gln Tyr Arg Asn Gly Glu Ser Val Lys Leu His Leu Glu
            580                 585                 590
Thr Asp Ser Leu Ala Leu Val Ala Leu Gly Ala Leu Asp Thr Ala Leu
        595                 600                 605
Tyr Ala Ala Gly Ser Lys Ser His Lys Pro Leu Asn Met Gly Lys Val
    610                 615                 620
Phe Glu Ala Met Asn Ser Tyr Asp Leu Gly Cys Gly Pro Gly Gly Gly
625                 630                 635                 640
Asp Ser Ala Leu Gln Val Phe Gln Ala Ala Gly Leu Ala Phe Ser Asp
                645                 650                 655
Gly Asp Gln Trp Thr Leu Ser Arg Lys Arg Leu Ser Cys Pro Lys Glu
            660                 665                 670
Lys Thr Thr Arg Lys Lys Arg Asn Val Asn Phe Gln Lys Ala Ile Asn
        675                 680                 685
Glu Lys Leu Gly Gln Tyr Ala Ser Pro Thr Ala Lys Arg Cys Cys Gln
    690                 695                 700
Asp Gly Val Thr Arg Leu Pro Met Met Arg Ser Cys Glu Gln Arg Ala
705                 710                 715                 720
Ala Arg Val Gln Gln Pro Asp Cys Arg Glu Pro Phe Leu Ser Cys Cys
                725                 730                 735
Gln Phe Ala Glu Ser Leu Arg Lys Lys Ser Arg Asp Lys Gly Gln Ala
            740                 745                 750
Gly Leu Gln Arg Ala Leu Glu Ile Leu Gln Glu Glu Asp Leu Ile Asp
        755                 760                 765
Glu Asp Asp Ile Pro Val Arg Ser Phe Phe Pro Glu Asn Trp Leu Trp
    770                 775                 780
Arg Val Glu Thr Val Asp Arg Phe Gln Ile Leu Thr Leu Trp Leu Pro
785                 790                 795                 800
Asp Ser Leu Thr Thr Trp Glu Ile His Gly Leu Ser Leu Ser Lys Thr
                805                 810                 815
Lys Gly Leu Cys Val Ala Thr Pro Val Gln Leu Arg Val Phe Arg Glu
            820                 825                 830
Phe His Leu His Leu Arg Leu Pro Met Ser Val Arg Arg Phe Glu Gln
        835                 840                 845
Leu Glu Leu Arg Pro Val Leu Tyr Asn Tyr Leu Asp Lys Asn Leu Thr
    850                 855                 860
Val Ser Val His Val Ser Pro Val Glu Gly Leu Cys Leu Ala Gly Gly
865                 870                 875                 880
Gly Gly Leu Ala Gln Gln Val Leu Val Pro Ala Gly Ser Ala Arg Pro
                885                 890                 895
Val Ala Phe Ser Val Val Pro Thr Ala Ala Ala Ala Val Ser Leu Lys
            900                 905                 910
Val Val Ala Arg Gly Ser Phe Glu Phe Pro Val Gly Asp Ala Val Ser
        915                 920                 925
Lys Val Leu Gln Ile Glu Lys Glu Gly Ala Ile His Arg Glu Glu Leu
    930                 935                 940
Val Tyr Glu Leu Asn Pro Leu Asp His Arg Gly Arg Thr Leu Glu Ile
945                 950                 955                 960
Pro Gly Asn Ser Asp Pro Asn Met Ile Pro Asp Gly Asp Phe Asn Ser
                965                 970                 975
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Tyr Val Arg Val Thr Ala Ser Asp Pro Leu Asp Thr Leu Gly Ser Glu
980 985 990
Gly Ala Leu Ser Pro Gly Gly Val Ala Ser Leu Leu Arg Leu Pro Arg
995 1000 1005
Gly Cys Gly Glu Gln Thr Met Ile Tyr Leu Ala Pro Thr Leu Ala
1010 1015 1020
Ala Ser Arg Tyr Leu Asp Lys Thr Glu Gln Trp Ser Thr Leu Pro
1025 1030 1035
Pro Glu Thr Lys Asp His Ala Val Asp Leu Ile Gln Lys Gly Tyr
1040 1045 1050
Met Arg Ile Gln Gln Phe Arg Lys Ala Asp Gly Ser Tyr Ala Ala
1055 1060 1065
Trp Leu Ser Arg Asp Ser Ser Thr Trp Leu Thr Ala Phe Val Leu
1070 1075 1080
Lys Val Leu Ser Leu Ala Gln Glu Gln Val Gly Gly Ser Pro Glu
1085 1090 1095
Lys Leu Gln Glu Thr Ser Asn Trp Leu Leu Ser Gln Gln Gln Ala
1100 1105 1110
Asp Gly Ser Phe Gln Asp Pro Cys Pro Val Leu Asp Arg Ser Met
1115 1120 1125
Gln Gly Gly Leu Val Gly Asn Asp Glu Thr Val Ala Leu Thr Ala
1130 1135 1140
Phe Val Thr Ile Ala Leu His His Gly Leu Ala Val Phe Gln Asp
1145 1150 1155
Glu Gly Ala Glu Pro Leu Lys Gln Arg Val Glu Ala Ser Ile Ser
1160 1165 1170
Lys Ala Asn Ser Phe Leu Gly Glu Lys Ala Ser Ala Gly Leu Leu
1175 1180 1185
Gly Ala His Ala Ala Ala Ile Thr Ala Tyr Ala Leu Ser Leu Thr
1190 1195 1200
Lys Ala Pro Val Asp Leu Leu Gly Val Ala His Asn Asn Leu Met
1205 1210 1215
Ala Met Ala Gln Glu Thr Gly Asp Asn Leu Tyr Trp Gly Ser Val
1220 1225 1230
Thr Gly Ser Gln Ser Asn Ala Val Ser Pro Thr Pro Ala Pro Arg
1235 1240 1245
Asn Pro Ser Asp Pro Met Pro Gln Ala Pro Ala Leu Trp Ile Glu
1250 1255 1260
Thr Thr Ala Tyr Ala Leu Leu His Leu Leu Leu His Glu Gly Lys
1265 1270 1275
Ala Glu Met Ala Asp Gln Ala Ser Ala Trp Leu Thr Arg Gln Gly
1280 1285 1290
Ser Phe Gln Gly Gly Phe Arg Ser Thr Gln Asp Thr Val Ile Ala
1295 1300 1305
Leu Asp Ala Leu Ser Ala Tyr Trp Ile Ala Ser His Thr Thr Glu
1310 1315 1320
Glu Arg Gly Leu Asn Val Thr Leu Ser Ser Thr Gly Arg Asn Gly
1325 1330 1335
Phe Lys Ser His Ala Leu Gln Leu Asn Asn Arg Gln Ile Arg Gly
1340 1345 1350
Leu Glu Glu Glu Leu Gln Phe Ser Leu Gly Ser Lys Ile Asn Val
1355 1360 1365
Lys Val Gly Gly Asn Ser Lys Gly Thr Leu Lys Val Leu Arg Thr
1370 1375 1380
Tyr Asn Val Leu Asp Met Lys Asn Thr Thr Cys Gln Asp Leu Gln
1385 1390 1395
Ile Glu Val Thr Val Lys Gly His Val Glu Tyr Thr Met Glu Ala
1400 1405 1410
Asn Glu Asp Tyr Glu Tyr Asp Glu Leu Pro Ala Lys Asp Asp Pro
1415 1420 1425
Asp Ala Pro Leu Gln Pro Val Thr Pro Leu Gln Leu Phe Glu Gly
1430 1435 1440
Arg Arg Asn Arg Arg Arg Arg Glu Ala Pro Lys Val Val Glu Glu
1445 1450 1455
Gln Glu Ser Arg Val His Tyr Thr Val Cys Ile Trp Arg Asn Gly
1460 1465 1470
Lys Val Gly Leu Ser Gly Met Ala Ile Ala Asp Val Thr Leu Leu
1475 1480 1485
Ser Gly Phe His Ala Leu Arg Ala Asp Leu Glu Lys Leu Thr Ser

1490 1495 1500
Leu Ser Asp Arg Tyr Val Ser His Phe Glu Thr Glu Gly Pro His
1505 1510 1515
Val Leu Leu Tyr Phe Asp Ser Val Pro Thr Ser Arg Glu Cys Val
1520 1525 1530
Gly Phe Glu Ala Val Gln Glu Val Pro Val Gly Leu Val Gln Pro
1535 1540 1545
Ala Ser Ala Thr Leu Tyr Asp Tyr Tyr Asn Pro Glu Arg Arg Cys
1550 1555 1560
Ser Val Phe Tyr Gly Ala Pro Ser Lys Ser Arg Leu Leu Ala Thr
1565 1570 1575
Leu Cys Ser Ala Glu Val Cys Gln Cys Ala Glu Gly Lys Cys Pro
1580 1585 1590
Arg Gln Arg Arg Ala Leu Glu Arg Gly Leu Gln Asp Glu Asp Gly
1595 1600 1605
Tyr Arg Met Lys Phe Ala Cys Tyr Tyr Pro Arg Val Glu Tyr Gly
1610 1615 1620
Phe Gln Val Lys Val Leu Arg Glu Asp Ser Arg Ala Ala Phe Arg
1625 1630 1635
Leu Phe Glu Thr Lys Ile Thr Gln Val Leu His Phe Thr Lys Asp
1640 1645 1650
Val Lys Ala Ala Ala Asn Gln Met Arg Asn Phe Leu Val Arg Ala
1655 1660 1665
Ser Cys Arg Leu Arg Leu Glu Pro Gly Lys Glu Tyr Leu Ile Met
1670 1675 1680
Gly Leu Asp Gly Ala Thr Tyr Asp Leu Glu Gly His Pro Gln Tyr
1685 1690 1695
Leu Leu Asp Ser Asn Ser Trp Ile Glu Glu Met Pro Ser Glu Arg
1700 1705 1710
Leu Cys Arg Ser Thr Arg Gln Arg Ala Ala Cys Ala Gln Leu Asn
1715 1720 1725
Asp Phe Leu Gln Glu Tyr Gly Thr Gln Gly Cys Gln Val
1730 1735 1740

<210> 280
<211> 2150
<212> PRT
<213> Homo sapiens
<400> 280
Met Tyr Pro Asn Trp Gly Arg Tyr Gly Gly Ser Ser His Tyr Pro Pro
1 5 10 15
Pro Pro Val Pro Pro Pro Pro Pro Val Ala Leu Pro Glu Ala Ser Pro
20 25 30
Gly Pro Gly Tyr Ser Ser Ser Thr Thr Pro Ala Ala Pro Ser Ser Ser
35 40 45
Gly Phe Met Ser Phe Arg Glu Gln His Leu Ala Gln Leu Gln Gln Leu
50 55 60
Gln Gln Met His Gln Lys Gln Met Gln Cys Val Leu Gln Pro His His
65 70 75 80
Leu Pro Pro Pro Pro Leu Pro Pro Pro Pro Val Met Pro Gly Gly Gly
85 90 95
Tyr Gly Asp Trp Gln Pro Pro Pro Pro Pro Met Pro Pro Pro Pro Gly
100 105 110
Pro Ala Leu Ser Tyr Gln Lys Gln Gln Gln Tyr Lys His Gln Met Leu
115 120 125
His His Gln Arg Asp Gly Pro Pro Gly Leu Val Pro Met Glu Leu Glu
130 135 140
Ser Pro Pro Glu Ser Pro Pro Val Pro Pro Gly Ser Tyr Met Pro Pro
145 150 155 160
Ser Gln Ser Tyr Met Pro Pro Pro Gln Pro Pro Pro Ser Tyr Tyr Pro
165 170 175
Pro Thr Ser Ser Gln Pro Tyr Leu Pro Pro Ala Gln Pro Ser Pro Ser
180 185 190
Gln Ser Pro Pro Ser Gln Ser Tyr Leu Ala Pro Thr Pro Ser Tyr Ser
195 200 205
Ser Ser Ser Ser Ser Ser Gln Ser Tyr Leu Ser His Ser Gln Ser Tyr
210 215 220
Leu Pro Ser Ser Gln Ala Ser Pro Ser Arg Pro Ser Gln Gly His Ser
225 230 235 240

Lys Ser Gln Leu Leu Ala Pro Pro Pro Pro Ser Ala Pro Pro Gly Asn
245 250 255
Lys Thr Thr Val Gln Gln Glu Pro Leu Glu Ser Gly Ala Lys Asn Lys
260 265 270
Ser Thr Glu Gln Gln Gln Ala Ala Pro Glu Pro Asp Pro Ser Thr Met
275 280 285
Thr Pro Gln Glu Gln Gln Gln Tyr Trp Tyr Arg Gln His Leu Leu Ser
290 295 300
Leu Gln Gln Arg Thr Lys Val His Leu Pro Gly His Lys Lys Gly Pro
305 310 315 320
Val Val Ala Lys Asp Thr Pro Glu Pro Val Lys Glu Glu Val Thr Val
325 330 335
Pro Ala Thr Ser Gln Val Pro Glu Ser Pro Ser Ser Glu Glu Pro Pro
340 345 350
Leu Pro Pro Pro Asn Glu Glu Val Pro Pro Pro Leu Pro Pro Glu Glu
355 360 365
Pro Gln Ser Glu Asp Pro Glu Glu Asp Ala Arg Leu Lys Gln Leu Gln
370 375 380
Ala Ala Ala Ala His Trp Gln Gln His Gln Gln His Arg Val Gly Phe
385 390 395 400
Gln Tyr Gln Gly Ile Met Gln Lys His Thr Gln Leu Gln Gln Ile Leu
405 410 415
Gln Gln Tyr Gln Gln Ile Ile Gln Pro Pro Pro His Ile Gln Thr Met
420 425 430
Ser Val Asp Met Gln Leu Arg His Tyr Glu Met Gln Gln Gln Gln Phe
435 440 445
Gln His Leu Tyr Gln Glu Trp Glu Arg Glu Phe Gln Leu Trp Glu Glu
450 455 460
Gln Leu His Ser Tyr Pro His Lys Asp Gln Leu Gln Glu Tyr Glu Lys
465 470 475 480
Gln Trp Lys Thr Trp Gln Gly His Met Lys Ala Thr Gln Ser Tyr Leu
485 490 495
Gln Glu Lys Val Asn Ser Phe Gln Asn Met Lys Asn Gln Tyr Met Gly
500 505 510
Asn Met Ser Met Pro Pro Pro Phe Val Pro Tyr Ser Gln Met Pro Pro
515 520 525
Pro Leu Pro Thr Met Pro Pro Pro Val Leu Pro Pro Ser Leu Pro Pro
530 535 540
Pro Val Met Pro Pro Ala Leu Pro Ala Thr Val Pro Pro Pro Gly Met
545 550 555 560
Pro Pro Pro Val Met Pro Pro Ser Leu Pro Thr Ser Val Pro Pro Pro
565 570 575
Gly Met Pro Pro Ser Leu Ser Ser Ala Gly Pro Pro Pro Val Leu Pro
580 585 590
Pro Pro Ser Leu Ser Ser Ala Gly Pro Pro Pro Val Leu Pro Pro Pro
595 600 605
Ser Leu Ser Ser Thr Ala Pro Pro Pro Val Met Pro Leu Pro Pro Leu
610 615 620
Ser Ser Ala Thr Pro Pro Pro Gly Ile Pro Pro Pro Gly Val Pro Gln
625 630 635 640
Gly Ile Pro Pro Gln Leu Thr Ala Ala Pro Val Pro Pro Ala Ser Ser
645 650 655
Ser Gln Ser Ser Gln Val Pro Glu Lys Pro Arg Pro Ala Leu Leu Pro
660 665 670
Thr Pro Val Ser Phe Gly Ser Ala Pro Pro Thr Thr Tyr His Pro Pro
675 680 685
Leu Gln Ser Ala Gly Pro Ser Glu Gln Val Asn Ser Lys Ala Pro Leu
690 695 700
Ser Lys Ser Ala Leu Pro Tyr Ser Ser Phe Ser Ser Asp Gln Gly Leu
705 710 715 720
Gly Glu Ser Ser Ala Ala Pro Ser Gln Pro Ile Thr Ala Val Lys Asp
725 730 735
Met Pro Val Arg Ser Gly Gly Leu Leu Pro Asp Pro Pro Arg Ser Ser
740 745 750
Tyr Leu Glu Ser Pro Arg Gly Pro Arg Phe Asp Gly Pro Arg Arg Phe
755 760 765
Glu Asp Leu Gly Ser Arg Cys Glu Gly Pro Arg Pro Lys Gly Pro Arg
770 775 780
Phe Glu Gly Asn Arg Pro Asp Gly Pro Arg Pro Arg Tyr Glu Gly His

785 790 795 800
Pro Ala Glu Gly Thr Lys Ser Lys Trp Gly Met Ile Pro Arg Gly Pro
805 810 815
Ala Ser Gln Phe Tyr Ile Thr Pro Ser Thr Ser Leu Ser Pro Arg Gln
820 825 830
Ser Gly Pro Gln Trp Lys Gly Pro Lys Pro Ala Phe Gly Gln Gln His
835 840 845
Gln Gln Gln Pro Lys Ser Gln Ala Glu Pro Leu Ser Gly Asn Lys Glu
850 855 860
Pro Leu Ala Asp Thr Ser Ser Asn Gln Gln Lys Asn Phe Lys Met Gln
865 870 875 880
Ser Ala Ala Phe Ser Ile Ala Ala Asp Val Lys Asp Val Lys Ala Ala
885 890 895
Gln Ser Asn Glu Asn Leu Ser Asp Ser Gln Gln Glu Pro Pro Lys Ser
900 905 910
Glu Val Ser Glu Gly Pro Val Glu Pro Ser Asn Trp Asp Gln Asn Val
915 920 925
Gln Ser Met Glu Thr Gln Ile Asp Lys Ala Gln Ala Val Thr Gln Pro
930 935 940
Val Pro Leu Ala Asn Lys Pro Val Pro Ala Gln Ser Thr Phe Pro Ser
945 950 955 960
Lys Thr Gly Gly Met Glu Gly Gly Thr Ala Val Ala Thr Ser Ser Leu
965 970 975
Thr Ala Asp Asn Asp Phe Lys Pro Val Gly Ile Gly Leu Pro His Ser
980 985 990
Glu Asn Asn Gln Asp Lys Gly Leu Pro Arg Pro Asp Asn Arg Asp Asn
995 1000 1005
Arg Leu Glu Gly Asn Arg Gly Asn Ser Ser Ser Tyr Arg Gly Pro
1010 1015 1020
Gly Gln Ser Arg Met Glu Asp Thr Arg Asp Lys Gly Leu Val Asn
1025 1030 1035
Arg Gly Arg Gly Gln Ala Ile Ser Arg Gly Pro Gly Leu Val Lys
1040 1045 1050
Gln Glu Asp Phe Arg Asp Lys Met Met Gly Arg Arg Glu Asp Ser
1055 1060 1065
Arg Glu Lys Met Asn Arg Gly Glu Gly Ser Arg Asp Arg Gly Leu
1070 1075 1080
Val Arg Pro Gly Ser Ser Arg Glu Lys Val Pro Gly Gly Leu Gln
1085 1090 1095
Gly Ser Gln Asp Arg Gly Ala Ala Gly Ser Arg Glu Arg Gly Pro
1100 1105 1110
Pro Arg Arg Ala Gly Ser Gln Glu Arg Gly Pro Leu Arg Arg Ala
1115 1120 1125
Gly Ser Arg Glu Arg Ile Pro Pro Arg Arg Ala Gly Ser Arg Glu
1130 1135 1140
Arg Gly Pro Pro Arg Gly Pro Gly Ser Arg Glu Arg Gly Leu Gly
1145 1150 1155
Arg Ser Asp Phe Gly Arg Asp Arg Gly Pro Phe Arg Pro Glu Pro
1160 1165 1170
Gly Asp Gly Gly Glu Lys Met Tyr Pro Tyr His Arg Asp Glu Pro
1175 1180 1185
Pro Arg Ala Pro Trp Asn His Gly Glu Glu Arg Gly His Glu Glu
1190 1195 1200
Phe Pro Leu Asp Gly Arg Asn Ala Pro Met Glu Arg Glu Arg Leu
1205 1210 1215
Asp Asp Trp Asp Arg Glu Arg Tyr Trp Arg Glu Cys Glu Arg Asp
1220 1225 1230
Tyr Gln Asp Asp Thr Leu Glu Leu Tyr Asn Arg Glu Asp Arg Phe
1235 1240 1245
Ser Ala Pro Pro Ser Arg Ser His Asp Gly Asp Arg Arg Gly Pro
1250 1255 1260
Trp Trp Asp Asp Trp Glu Arg Asp Gln Asp Met Asp Glu Asp Tyr
1265 1270 1275
Asn Arg Glu Met Glu Arg Asp Met Asp Arg Asp Val Asp Arg Ile
1280 1285 1290
Ser Arg Pro Met Asp Met Tyr Asp Arg Ser Leu Asp Asn Glu Trp
1295 1300 1305
Asp Arg Asp Tyr Gly Arg Pro Leu Asp Glu Gln Glu Ser Gln Phe
1310 1315 1320

Arg Glu Arg Asp Ile Pro Ser Leu Pro Pro Leu Pro Pro Leu Pro
1325 1330 1335
Pro Leu Pro Pro Leu Asp Arg Tyr Arg Asp Asp Arg Trp Arg Glu
1340 1345 1350
Glu Arg Asn Arg Glu His Gly Tyr Asp Arg Asp Phe Arg Asp Arg
1355 1360 1365
Gly Glu Leu Arg Ile Arg Glu Tyr Pro Glu Arg Gly Asp Thr Trp
1370 1375 1380
Arg Glu Lys Arg Asp Tyr Val Pro Asp Arg Met Asp Trp Glu Arg
1385 1390 1395
Glu Arg Leu Ser Asp Arg Trp Tyr Pro Ser Asp Val Asp Arg His
1400 1405 1410
Ser Pro Met Ala Glu His Met Pro Ser Ser His His Ser Ser Glu
1415 1420 1425
Met Met Gly Ser Asp Ala Ser Leu Asp Ser Asp Gln Gly Leu Gly
1430 1435 1440
Gly Val Met Val Leu Ser Gln Arg Gln His Glu Ile Ile Leu Lys
1445 1450 1455
Ala Ala Gln Glu Leu Lys Met Leu Arg Glu Gln Lys Glu Gln Leu
1460 1465 1470
Gln Lys Met Lys Asp Phe Gly Ser Glu Pro Gln Met Ala Asp His
1475 1480 1485
Leu Pro Pro Gln Glu Ser Arg Leu Gln Asn Thr Ser Ser Arg Pro
1490 1495 1500
Gly Met Tyr Pro Pro Pro Gly Ser Tyr Arg Pro Pro Pro Pro Met
1505 1510 1515
Gly Lys Pro Pro Gly Ser Ile Val Arg Pro Ser Ala Pro Pro Ala
1520 1525 1530
Arg Ser Ser Val Pro Val Thr Arg Pro Pro Val Pro Ile Pro Pro
1535 1540 1545
Pro Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Val Ile Lys
1550 1555 1560
Pro Gln Thr Ser Ala Val Glu Gln Glu Arg Trp Asp Glu Asp Ser
1565 1570 1575
Phe Tyr Gly Leu Trp Asp Thr Asn Asp Glu Gln Gly Leu Asn Ser
1580 1585 1590
Glu Phe Lys Ser Glu Thr Ala Ala Ile Pro Ser Ala Pro Val Leu
1595 1600 1605
Pro Pro Pro Pro Val His Ser Ser Ile Pro Pro Pro Gly Pro Val
1610 1615 1620
Pro Met Gly Met Pro Pro Met Ser Lys Pro Pro Pro Val Gln Gln
1625 1630 1635
Thr Val Asp Tyr Gly His Gly Arg Asp Ile Ser Thr Asn Lys Val
1640 1645 1650
Glu Gln Ile Pro Tyr Gly Glu Arg Ile Thr Leu Arg Pro Asp Pro
1655 1660 1665
Leu Pro Glu Arg Ser Thr Phe Glu Thr Glu His Ala Gly Gln Arg
1670 1675 1680
Asp Arg Tyr Asp Arg Glu Arg Asp Arg Glu Pro Tyr Phe Asp Arg
1685 1690 1695
Gln Ser Asn Val Ile Ala Asp His Arg Asp Phe Lys Arg Asp Arg
1700 1705 1710
Glu Thr His Arg Asp Arg Asp Arg Asp Arg Gly Val Ile Asp Tyr
1715 1720 1725
Asp Arg Asp Arg Phe Asp Arg Glu Arg Arg Pro Arg Asp Asp Arg
1730 1735 1740
Ala Gln Ser Tyr Arg Asp Lys Lys Asp His Ser Ser Ser Arg Arg
1745 1750 1755
Gly Gly Phe Asp Arg Pro Ser Tyr Asp Arg Lys Ser Asp Arg Pro
1760 1765 1770
Val Tyr Glu Gly Pro Ser Met Phe Gly Gly Glu Arg Arg Thr Tyr
1775 1780 1785
Pro Glu Glu Arg Met Pro Leu Pro Ala Pro Ser Leu Ser His Gln
1790 1795 1800
Pro Pro Pro Ala Pro Arg Val Glu Lys Lys Pro Glu Ser Lys Asn
1805 1810 1815
Val Asp Asp Ile Leu Lys Pro Pro Gly Arg Glu Ser Arg Pro Glu
1820 1825 1830
Arg Ile Val Val Ile Met Arg Gly Leu Pro Gly Ser Gly Lys Thr

1835 1840 1845
His Val Ala Lys Leu Ile Arg Asp Lys Glu Val Glu Phe Gly Gly
1850 1855 1860
Pro Ala Pro Arg Val Leu Ser Leu Asp Asp Tyr Phe Ile Thr Glu
1865 1870 1875
Val Glu Lys Glu Glu Lys Asp Pro Asp Ser Gly Lys Lys Val Lys
1880 1885 1890
Lys Lys Val Met Glu Tyr Glu Tyr Glu Ala Glu Met Glu Glu Thr
1895 1900 1905
Tyr Arg Thr Ser Met Phe Lys Thr Phe Lys Lys Thr Leu Asp Asp
1910 1915 1920
Gly Phe Phe Pro Phe Ile Ile Leu Asp Ala Ile Asn Asp Arg Val
1925 1930 1935
Arg His Phe Asp Gln Phe Trp Ser Ala Ala Lys Thr Lys Gly Phe
1940 1945 1950
Glu Val Tyr Leu Ala Glu Met Ser Ala Asp Asn Gln Thr Cys Gly
1955 1960 1965
Lys Arg Asn Ile His Gly Arg Lys Leu Lys Glu Ile Asn Lys Met
1970 1975 1980
Ala Asp His Trp Glu Thr Ala Pro Arg His Met Met Arg Leu Asp
1985 1990 1995
Ile Arg Ser Leu Leu Gln Asp Ala Ala Ile Glu Glu Val Glu Met
2000 2005 2010
Glu Asp Phe Asp Ala Asn Ile Glu Glu Gln Lys Glu Glu Lys Lys
2015 2020 2025
Asp Ala Glu Glu Glu Glu Ser Glu Leu Gly Tyr Ile Pro Lys Ser
2030 2035 2040
Lys Trp Glu Met Asp Thr Ser Glu Ala Lys Leu Asp Lys Leu Asp
2045 2050 2055
Gly Leu Arg Thr Gly Thr Lys Arg Lys Arg Asp Trp Glu Ala Ile
2060 2065 2070
Ala Ser Arg Met Glu Asp Tyr Leu Gln Leu Pro Asp Asp Tyr Asp
2075 2080 2085
Thr Arg Ala Ser Glu Ala Lys Ala Ser Arg Ser Phe Phe Val Cys
2090 2095 2100
His Leu Ala Ser Thr Phe Gln Phe Leu Phe Cys Phe Tyr Cys Phe
2105 2110 2115
Ser Phe Phe Asp Ala Glu Glu Glu Glu Ser Glu Leu Val Gly Asp
2120 2125 2130
Arg Pro Thr Thr Leu Asn Ser Val Ser Leu Leu Lys Phe Leu Lys
2135 2140 2145
Lys Val
2150

<210> 281
<211> 979
<212> PRT
<213> Homo sapiens
<400> 281
Met Ser Val Leu Gly Glu Tyr Glu Arg His Cys Asp Ser Ile Asn Ser
1 5 10 15
Asp Phe Gly Ser Glu Ser Gly Gly Cys Gly Asp Ser Ser Pro Gly Pro
20 25 30
Ser Ala Ser Gln Gly Pro Arg Ala Gly Gly Gly Ala Ala Glu Gln Glu
35 40 45
Glu Leu His Tyr Ile Pro Ile Arg Val Leu Gly Arg Gly Ala Phe Gly
50 55 60
Glu Ala Thr Leu Tyr Arg Arg Thr Glu Asp Asp Ser Leu Val Val Trp
65 70 75 80
Lys Glu Val Asp Leu Thr Arg Leu Ser Glu Lys Glu Arg Arg Asp Ala
85 90 95
Leu Asn Glu Ile Val Ile Leu Ala Leu Leu Gln His Asp Asn Ile Ile
100 105 110
Ala Tyr Tyr Asn His Phe Met Asp Asn Thr Thr Leu Leu Ile Glu Leu
115 120 125
Glu Tyr Cys Asn Gly Gly Asn Leu Tyr Asp Lys Ile Leu Arg Gln Lys
130 135 140
Asp Lys Leu Phe Glu Glu Glu Met Val Val Trp Tyr Leu Phe Gln Ile
145 150 155 160

Val Ser Ala Val Ser Cys Ile His Lys Ala Gly Ile Leu His Arg Asp
165 170 175
Ile Lys Thr Leu Asn Ile Phe Leu Thr Lys Ala Asn Leu Ile Lys Leu
180 185 190
Gly Asp Tyr Gly Leu Ala Lys Lys Leu Asn Ser Glu Tyr Ser Met Ala
195 200 205
Glu Thr Leu Val Gly Thr Pro Tyr Tyr Met Ser Pro Glu Leu Cys Gln
210 215 220
Gly Val Lys Tyr Asn Phe Lys Ser Asp Ile Trp Ala Val Gly Cys Val
225 230 235 240
Ile Phe Glu Leu Leu Thr Leu Lys Arg Thr Phe Asp Ala Thr Asn Pro
245 250 255
Leu Asn Leu Cys Val Lys Ile Val Gln Gly Ile Arg Ala Met Glu Val
260 265 270
Asp Ser Ser Gln Tyr Ser Leu Glu Leu Ile Gln Met Val His Ser Cys
275 280 285
Leu Asp Gln Asp Pro Glu Gln Arg Pro Thr Ala Asp Glu Leu Leu Asp
290 295 300
Arg Pro Leu Leu Arg Lys Arg Arg Arg Glu Met Glu Glu Lys Val Thr
305 310 315 320
Leu Leu Asn Ala Pro Thr Lys Arg Pro Arg Ser Ser Thr Val Thr Glu
325 330 335
Ala Pro Ile Ala Val Val Thr Ser Arg Thr Ser Glu Val Tyr Ile Trp
340 345 350
Gly Gly Gly Lys Ser Thr Pro Gln Lys Leu Asp Val Ile Lys Ser Gly
355 360 365
Cys Ser Ala Arg Gln Val Cys Ala Gly Asn Thr His Phe Ala Val Val
370 375 380
Thr Val Glu Lys Glu Leu Tyr Thr Trp Val Asn Met Gln Gly Gly Thr
385 390 395 400
Lys Leu His Gly Gln Leu Gly His Gly Asp Lys Ala Ser Tyr Arg Gln
405 410 415
Pro Lys His Val Glu Lys Leu Gln Gly Lys Ala Ile His Gln Val Ser
420 425 430
Cys Gly Asp Asp Phe Thr Val Cys Val Thr Asp Glu Gly Gln Leu Tyr
435 440 445
Ala Phe Gly Ser Asp Tyr Tyr Gly Cys Met Gly Val Asp Lys Val Ala
450 455 460
Gly Pro Glu Val Leu Glu Pro Met Gln Leu Asn Phe Phe Leu Ser Asn
465 470 475 480
Pro Val Glu Gln Val Ser Cys Gly Asp Asn His Val Val Val Leu Thr
485 490 495
Arg Asn Lys Glu Val Tyr Ser Trp Gly Cys Gly Glu Tyr Gly Arg Leu
500 505 510
Gly Leu Asp Ser Glu Glu Asp Tyr Tyr Thr Pro Gln Lys Val Asp Val
515 520 525
Pro Lys Ala Leu Ile Ile Val Ala Val Gln Cys Gly Cys Asp Gly Thr
530 535 540
Phe Leu Leu Thr Gln Ser Gly Lys Val Leu Ala Cys Gly Leu Asn Glu
545 550 555 560
Phe Asn Lys Leu Gly Leu Asn Gln Cys Met Ser Gly Ile Ile Asn His
565 570 575
Glu Ala Tyr His Glu Val Pro Tyr Thr Thr Ser Phe Thr Leu Ala Lys
580 585 590
Gln Leu Ser Phe Tyr Lys Ile Arg Thr Ile Ala Pro Gly Lys Thr His
595 600 605
Thr Ala Ala Ile Asp Glu Arg Gly Arg Leu Leu Thr Phe Gly Cys Asn
610 615 620
Lys Cys Gly Gln Leu Gly Val Gly Asn Tyr Lys Lys Arg Leu Gly Ile
625 630 635 640
Asn Leu Leu Gly Gly Pro Leu Gly Gly Lys Gln Val Ile Arg Val Ser
645 650 655
Cys Gly Asp Glu Phe Thr Ile Ala Ala Thr Asp Asp Asn His Ile Phe
660 665 670
Ala Trp Gly Asn Gly Gly Asn Gly Arg Leu Ala Met Thr Pro Thr Glu
675 680 685
Arg Pro His Gly Ser Asp Ile Cys Thr Ser Trp Pro Arg Pro Ile Phe
690 695 700
Gly Ser Leu His His Val Pro Asp Leu Ser Cys Arg Gly Trp His Thr

705 710 715 720
Ile Leu Ile Val Glu Lys Val Leu Asn Ser Lys Thr Ile Arg Ser Asn
725 730 735
Ser Ser Gly Leu Ser Ile Gly Thr Val Phe Gln Ser Ser Ser Pro Gly
740 745 750
Gly Gly Gly Gly Gly Gly Gly Gly Glu Glu Glu Asp Ser Gln Gln Glu
755 760 765
Ser Glu Thr Pro Asp Pro Ser Gly Gly Phe Arg Gly Thr Met Glu Ala
770 775 780
Asp Arg Gly Met Glu Gly Leu Ile Ser Pro Thr Glu Ala Met Gly Asn
785 790 795 800
Ser Asn Gly Ala Ser Ser Ser Cys Pro Gly Trp Leu Arg Lys Glu Leu
805 810 815
Glu Asn Ala Glu Phe Ile Pro Met Pro Asp Ser Pro Ser Pro Leu Ser
820 825 830
Ala Ala Phe Ser Glu Ser Glu Lys Asp Thr Leu Pro Tyr Glu Glu Leu
835 840 845
Gln Gly Leu Lys Val Ala Ser Glu Ala Pro Leu Glu His Lys Pro Gln
850 855 860
Val Glu Ala Ser Ser Pro Arg Leu Asn Pro Ala Val Thr Cys Ala Gly
865 870 875 880
Lys Gly Thr Pro Leu Thr Pro Pro Ala Cys Ala Cys Ser Ser Leu Gln
885 890 895
Val Glu Val Glu Arg Leu Gln Gly Leu Val Leu Lys Cys Leu Ala Glu
900 905 910
Gln Gln Lys Leu Gln Gln Glu Asn Leu Gln Ile Phe Thr Gln Leu Gln
915 920 925
Lys Leu Asn Lys Lys Leu Glu Gly Gly Gln Gln Val Gly Met His Ser
930 935 940
Lys Gly Thr Gln Thr Ala Lys Glu Glu Met Glu Met Asp Pro Lys Pro
945 950 955 960
Asp Leu Asp Ser Asp Ser Gly Cys Leu Leu Gly Thr Asp Ser Cys Arg
965 970 975
Pro Ser Leu

<210> 282
<211> 107
<212> PRT
<213> Homo sapiens
<400> 282
Met Arg Phe Phe Leu Phe Phe Phe Phe Phe Leu Arg Trp Ser Leu Val
1 5 10 15
Ser Pro Arg Leu Glu Cys Ser Gly Leu Val Leu Ala His Cys Asn Leu
20 25 30
His Leu Leu Gly Ser Arg Glu Ser Pro Ala Ser Ala Ser Arg Val Ala
35 40 45
Gly Ile Thr Gly Val Ser His His Thr Gln Thr His Leu Met Ser Phe
50 55 60
Asp Val Lys Ala Cys Asn Ser Asn Pro Tyr Val Trp Asn Ile Cys Ile
65 70 75 80
Thr Ser Glu Phe Phe His Leu Val Asn Ser Cys Thr Ser Leu Ser Cys
85 90 95
Pro Phe Phe Pro Pro Leu Ala Val Ser Tyr Cys
100 105

<210> 283
<211> 533
<212> PRT
<213> Homo sapiens
<400> 283
Met Thr Lys Lys Arg Ile Ala Val Ile Gly Gly Gly Val Ser Gly Leu
1 5 10 15
Ser Ser Ile Lys Cys Cys Val Glu Glu Gly Leu Glu Pro Val Cys Phe
20 25 30
Glu Arg Thr Asp Asp Ile Gly Gly Leu Trp Arg Phe Gln Glu Asn Pro
35 40 45
Glu Glu Gly Arg Ala Ser Ile Tyr Lys Ser Val Ile Ile Asn Thr Ser
50 55 60

```
Lys Glu Met Met Cys Phe Ser Asp Tyr Pro Ile Pro Asp His Tyr Pro
65                  70                  75                  80
Asn Phe Met His Asn Ala Gln Val Leu Glu Tyr Phe Arg Met Tyr Ala
                85                  90                  95
Lys Glu Phe Asp Leu Leu Lys Tyr Ile Arg Phe Lys Thr Thr Val Cys
            100                 105                 110
Ser Val Lys Lys Gln Pro Asp Phe Ala Thr Ser Gly Gln Trp Glu Val
        115                 120                 125
Val Thr Glu Ser Glu Gly Lys Lys Glu Met Asn Val Phe Asp Gly Val
    130                 135                 140
Met Val Cys Thr Gly His His Thr Asn Ala His Leu Pro Leu Glu Ser
145                 150                 155                 160
Phe Pro Gly Ile Glu Lys Phe Lys Gly Gln Tyr Phe His Ser Arg Asp
                165                 170                 175
Tyr Lys Asn Pro Glu Gly Phe Thr Gly Lys Arg Val Ile Ile Ile Gly
            180                 185                 190
Ile Gly Asn Ser Gly Gly Asp Leu Ala Val Glu Ile Ser Gln Thr Ala
        195                 200                 205
Lys Gln Val Phe Leu Ser Thr Arg Arg Gly Ala Trp Ile Leu Asn Arg
    210                 215                 220
Val Gly Asp Tyr Gly Tyr Pro Ala Asp Val Leu Phe Ser Ser Arg Leu
225                 230                 235                 240
Thr His Phe Ile Trp Lys Ile Cys Gly Gln Ser Leu Ala Asn Lys Tyr
                245                 250                 255
Leu Glu Lys Lys Ile Asn Gln Arg Phe Asp His Glu Met Phe Gly Leu
            260                 265                 270
Lys Pro Lys His Arg Ala Leu Ser Gln His Pro Thr Leu Asn Asp Asp
        275                 280                 285
Leu Pro Asn Arg Ile Ile Ser Gly Leu Val Lys Val Lys Gly Asn Val
    290                 295                 300
Lys Glu Phe Thr Glu Thr Ala Ala Ile Phe Glu Asp Gly Ser Arg Glu
305                 310                 315                 320
Asp Asp Ile Asp Ala Val Ile Phe Ala Thr Gly Tyr Ser Phe Asp Phe
                325                 330                 335
Pro Phe Leu Glu Asp Ser Val Lys Val Val Lys Asn Lys Ile Pro Leu
            340                 345                 350
Tyr Lys Lys Val Phe Pro Pro Asn Leu Glu Arg Pro Thr Leu Ala Ile
        355                 360                 365
Ile Gly Leu Ile Gln Pro Leu Gly Ala Ile Met Pro Ile Ser Glu Leu
    370                 375                 380
Gln Gly Arg Trp Ala Thr Gln Val Phe Lys Gly Leu Lys Thr Leu Pro
385                 390                 395                 400
Ser Gln Ser Glu Met Met Ala Glu Ile Ser Lys Ala Gln Glu Glu Ile
                405                 410                 415
Asp Lys Arg Tyr Val Glu Ser Gln Arg His Thr Ile Gln Gly Asp Tyr
            420                 425                 430
Ile Asp Thr Met Glu Glu Leu Ala Asp Leu Val Gly Val Arg Pro Asn
        435                 440                 445
Leu Leu Ser Leu Ala Phe Thr Asp Pro Lys Leu Ala Leu His Leu Leu
    450                 455                 460
Leu Gly Pro Cys Thr Pro Ile His Tyr Arg Val Gln Gly Pro Gly Lys
465                 470                 475                 480
Trp Asp Gly Ala Arg Lys Ala Ile Leu Thr Thr Asp Asp Arg Ile Arg
                485                 490                 495
Lys Pro Leu Met Thr Arg Val Val Glu Arg Ser Ser Ser Met Thr Ser
            500                 505                 510
Thr Met Thr Ile Gly Lys Phe Met Leu Ala Leu Ala Phe Phe Ala Ile
        515                 520                 525
Ile Ile Ala Tyr Phe
    530
```

<210> 284
<211> 757
<212> PRT
<213> Homo sapiens
<400> 284

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Met Val Pro Asp Thr Ala Cys Val Leu Leu Leu Thr Leu Ala Ala Leu
1               5                   10                  15
Gly Ala Ser Gly Gln Gly Gln Ser Pro Leu Gly Ser Asp Leu Gly Pro
```

```
                20                  25                  30
Gln Met Leu Arg Glu Leu Gln Glu Thr Asn Ala Ala Leu Gln Asp Val
            35                  40                  45
Arg Asp Trp Leu Arg Gln Gln Val Arg Glu Ile Thr Phe Leu Lys Asn
        50                  55                  60
Thr Val Met Glu Cys Asp Ala Cys Gly Met Gln Gln Ser Val Arg Thr
65                  70                  75                  80
Gly Leu Pro Ser Val Arg Pro Leu Leu His Cys Ala Pro Gly Phe Cys
                85                  90                  95
Phe Pro Gly Val Ala Cys Ile Gln Thr Glu Ser Gly Gly Arg Cys Gly
            100                 105                 110
Pro Cys Pro Ala Gly Phe Thr Gly Asn Gly Ser His Cys Thr Asp Val
        115                 120                 125
Asn Glu Cys Asn Ala His Pro Cys Phe Pro Arg Val Arg Cys Ile Asn
    130                 135                 140
Thr Ser Pro Gly Phe Arg Cys Glu Ala Cys Pro Pro Gly Tyr Ser Gly
145                 150                 155                 160
Pro Thr His Gln Gly Val Gly Leu Ala Phe Ala Lys Ala Asn Lys Gln
                165                 170                 175
Val Cys Thr Asp Ile Asn Glu Cys Glu Thr Gly Gln His Asn Cys Val
            180                 185                 190
Pro Asn Ser Val Cys Ile Asn Thr Arg Gly Ser Phe Gln Cys Gly Pro
        195                 200                 205
Cys Gln Pro Gly Phe Val Gly Asp Gln Ala Ser Gly Cys Gln Arg Gly
    210                 215                 220
Ala Gln Arg Phe Cys Pro Asp Gly Ser Pro Ser Glu Cys His Glu His
225                 230                 235                 240
Ala Asp Cys Val Leu Glu Arg Asp Gly Ser Arg Ser Cys Val Cys Arg
                245                 250                 255
Val Gly Trp Ala Gly Asn Gly Ile Leu Cys Gly Arg Asp Thr Asp Leu
            260                 265                 270
Asp Gly Phe Pro Asp Glu Lys Leu Arg Cys Pro Glu Pro Gln Cys Arg
        275                 280                 285
Lys Asp Asn Cys Val Thr Val Pro Asn Ser Gly Gln Glu Asp Val Asp
    290                 295                 300
Arg Asp Gly Ile Gly Asp Ala Cys Asp Pro Asp Ala Asp Gly Asp Gly
305                 310                 315                 320
Val Pro Asn Glu Lys Asp Asn Cys Pro Leu Val Arg Asn Pro Asp Gln
                325                 330                 335
Arg Asn Thr Asp Glu Asp Lys Trp Gly Asp Ala Cys Asp Asn Cys Arg
            340                 345                 350
Ser Gln Lys Asn Asp Asp Gln Lys Asp Thr Asp Gln Asp Gly Arg Gly
        355                 360                 365
Asp Ala Cys Asp Asp Asp Ile Asp Gly Asp Arg Ile Arg Asn Gln Ala
    370                 375                 380
Asp Asn Cys Pro Arg Val Pro Asn Ser Asp Gln Lys Asp Ser Asp Gly
385                 390                 395                 400
Asp Gly Ile Gly Asp Ala Cys Asp Asn Cys Pro Gln Lys Ser Asn Pro
                405                 410                 415
Asp Gln Ala Asp Val Asp His Asp Phe Val Gly Asp Ala Cys Asp Ser
            420                 425                 430
Asp Gln Asp Gln Asp Gly Asp Gly His Gln Asp Ser Arg Asp Asn Cys
        435                 440                 445
Pro Thr Val Pro Asn Ser Ala Gln Glu Asp Ser Asp His Asp Gly Gln
    450                 455                 460
Gly Asp Ala Cys Asp Asp Asp Asp Asp Asn Asp Gly Val Pro Asp Ser
465                 470                 475                 480
Arg Asp Asn Cys Arg Leu Val Pro Asn Pro Gly Gln Glu Asp Ala Asp
                485                 490                 495
Arg Asp Gly Val Gly Asp Val Cys Gln Asp Asp Phe Asp Ala Asp Lys
            500                 505                 510
Val Val Asp Lys Ile Asp Val Cys Pro Glu Asn Ala Glu Val Thr Leu
        515                 520                 525
Thr Asp Phe Arg Ala Phe Gln Thr Val Val Leu Asp Pro Glu Gly Asp
    530                 535                 540
Ala Gln Ile Asp Pro Asn Trp Val Val Leu Asn Gln Gly Arg Glu Ile
545                 550                 555                 560
Val Gln Thr Met Asn Ser Asp Pro Gly Leu Ala Val Gly Tyr Thr Ala
                565                 570                 575
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Phe Asn Gly Val Asp Phe Glu Gly Thr Phe His Val Asn Thr Val Thr
            580                 585                 590
Asp Asp Asp Tyr Ala Gly Phe Ile Phe Gly Tyr Gln Asp Ser Ser Ser
        595                 600                 605
Phe Tyr Val Val Met Trp Lys Gln Met Glu Gln Thr Tyr Trp Gln Ala
    610                 615                 620
Asn Pro Phe Arg Ala Val Ala Glu Pro Gly Ile Gln Leu Lys Ala Val
625                 630                 635                 640
Lys Ser Ser Thr Gly Pro Gly Glu Gln Leu Arg Asn Ala Leu Trp His
                645                 650                 655
Thr Gly Asp Thr Glu Ser Gln Val Arg Leu Leu Trp Lys Asp Pro Arg
            660                 665                 670
Asn Val Gly Trp Lys Asp Lys Lys Ser Tyr Arg Trp Phe Leu Gln His
        675                 680                 685
Arg Pro Gln Val Gly Tyr Ile Arg Val Arg Phe Tyr Glu Gly Pro Glu
    690                 695                 700
Leu Val Ala Asp Ser Asn Val Val Leu Asp Thr Thr Met Arg Gly Gly
705                 710                 715                 720
Arg Leu Gly Val Phe Cys Phe Ser Gln Glu Asn Ile Ile Trp Ala Asn
                725                 730                 735
Leu Arg Tyr Arg Cys Asn Asp Thr Ile Pro Glu Asp Tyr Glu Thr His
            740                 745                 750
Gln Leu Arg Gln Ala
        755
```

<210> 285
<211> 3396
<212> PRT
<213> Homo sapiens
<400> 285

```
Met Phe Ile Asn Ile Lys Ser Ile Leu Trp Met Cys Ser Thr Leu Ile
1                 5                  10                  15
Val Thr His Ala Leu His Lys Val Lys Val Gly Lys Ser Pro Pro Val
            20                  25                  30
Arg Gly Ser Leu Ser Gly Lys Val Ser Leu Pro Cys His Phe Ser Thr
        35                  40                  45
Met Pro Thr Leu Pro Pro Ser Tyr Asn Thr Ser Glu Phe Leu Arg Ile
    50                  55                  60
Lys Trp Ser Lys Ile Glu Val Asp Lys Asn Gly Lys Asp Leu Lys Glu
65                  70                  75                  80
Thr Thr Val Leu Val Ala Gln Asn Gly Asn Ile Lys Ile Gly Gln Asp
                85                  90                  95
Tyr Lys Gly Arg Val Ser Val Pro Thr His Pro Glu Ala Val Gly Asp
            100                 105                 110
Ala Ser Leu Thr Val Val Lys Leu Leu Ala Ser Asp Ala Gly Leu Tyr
        115                 120                 125
Arg Cys Asp Val Met Tyr Gly Ile Glu Asp Thr Gln Asp Thr Val Ser
    130                 135                 140
Leu Thr Val Asp Gly Val Val Phe His Tyr Arg Ala Ala Thr Ser Arg
145                 150                 155                 160
Tyr Thr Leu Asn Phe Glu Ala Ala Gln Lys Ala Cys Leu Asp Val Gly
                165                 170                 175
Ala Val Ile Ala Thr Pro Glu Gln Leu Phe Ala Ala Tyr Glu Asp Gly
            180                 185                 190
Phe Glu Gln Cys Asp Ala Gly Trp Leu Ala Asp Gln Thr Val Arg Tyr
        195                 200                 205
Pro Ile Arg Ala Pro Arg Val Gly Cys Tyr Gly Asp Lys Met Gly Lys
    210                 215                 220
Ala Gly Val Arg Thr Tyr Gly Phe Arg Ser Pro Gln Glu Thr Tyr Asp
225                 230                 235                 240
Val Tyr Cys Tyr Val Asp His Leu Asp Gly Asp Val Phe His Leu Thr
                245                 250                 255
Val Pro Ser Lys Phe Thr Phe Glu Glu Ala Ala Lys Glu Cys Glu Asn
            260                 265                 270
Gln Asp Ala Arg Leu Ala Thr Val Gly Glu Leu Gln Ala Ala Trp Arg
        275                 280                 285
Asn Gly Phe Asp Gln Cys Asp Tyr Gly Trp Leu Ser Asp Ala Ser Val
    290                 295                 300
Arg His Pro Val Thr Val Ala Arg Ala Gln Cys Gly Gly Gly Leu Leu
```

305 310 315 320
Gly Val Arg Thr Leu Tyr Arg Phe Glu Asn Gln Thr Gly Phe Pro Pro
325 330 335
Pro Asp Ser Arg Phe Asp Ala Tyr Cys Phe Lys Pro Lys Glu Ala Thr
340 345 350
Thr Ile Asp Leu Ser Ile Leu Ala Glu Thr Ala Ser Pro Ser Leu Ser
355 360 365
Lys Glu Pro Gln Met Val Ser Asp Arg Thr Thr Pro Ile Ile Pro Leu
370 375 380
Val Asp Glu Leu Pro Val Ile Pro Thr Glu Phe Pro Pro Val Gly Asn
385 390 395 400
Ile Val Ser Phe Glu Gln Lys Ala Thr Val Gln Pro Gln Ala Ile Thr
405 410 415
Asp Ser Leu Ala Thr Lys Leu Pro Thr Pro Thr Gly Ser Thr Lys Lys
420 425 430
Pro Trp Asp Met Asp Asp Tyr Ser Pro Ser Ala Ser Gly Pro Leu Gly
435 440 445
Lys Leu Asp Ile Ser Glu Ile Lys Glu Glu Val Leu Gln Ser Thr Thr
450 455 460
Gly Val Ser His Tyr Ala Thr Asp Ser Trp Asp Gly Val Val Glu Asp
465 470 475 480
Lys Gln Thr Gln Glu Ser Val Thr Gln Ile Glu Gln Ile Glu Val Gly
485 490 495
Pro Leu Val Thr Ser Met Glu Ile Leu Lys His Ile Pro Ser Lys Glu
500 505 510
Phe Pro Val Thr Glu Thr Pro Leu Val Thr Ala Arg Met Ile Leu Glu
515 520 525
Ser Lys Thr Glu Lys Lys Met Val Ser Thr Val Ser Glu Leu Val Thr
530 535 540
Thr Gly His Tyr Gly Phe Thr Leu Gly Glu Glu Asp Asp Glu Asp Arg
545 550 555 560
Thr Leu Thr Val Gly Ser Asp Glu Ser Thr Leu Ile Phe Asp Gln Ile
565 570 575
Pro Glu Val Ile Thr Val Ser Lys Thr Ser Glu Asp Thr Ile His Thr
580 585 590
His Leu Glu Asp Leu Glu Ser Val Ser Ala Ser Thr Thr Val Ser Pro
595 600 605
Leu Ile Met Pro Asp Asn Asn Gly Ser Ser Met Asp Asp Trp Glu Glu
610 615 620
Arg Gln Thr Ser Gly Arg Ile Thr Glu Glu Phe Leu Gly Lys Tyr Leu
625 630 635 640
Ser Thr Thr Pro Phe Pro Ser Gln His Arg Thr Glu Ile Glu Leu Phe
645 650 655
Pro Tyr Ser Gly Asp Lys Ile Leu Val Glu Gly Ile Ser Thr Val Ile
660 665 670
Tyr Pro Ser Leu Gln Thr Glu Met Thr His Arg Arg Glu Arg Thr Glu
675 680 685
Thr Leu Ile Pro Glu Met Arg Thr Asp Thr Tyr Thr Asp Glu Ile Gln
690 695 700
Glu Glu Ile Thr Lys Ser Pro Phe Met Gly Lys Thr Glu Glu Glu Val
705 710 715 720
Phe Ser Gly Met Lys Leu Ser Thr Ser Leu Ser Glu Pro Ile His Val
725 730 735
Thr Glu Ser Ser Val Glu Met Thr Lys Ser Phe Asp Phe Pro Thr Leu
740 745 750
Ile Thr Lys Leu Ser Ala Glu Pro Thr Glu Val Arg Asp Met Glu Glu
755 760 765
Asp Phe Thr Ala Thr Pro Gly Thr Thr Lys Tyr Asp Glu Asn Ile Thr
770 775 780
Thr Val Leu Leu Ala His Gly Thr Leu Ser Val Glu Ala Ala Thr Val
785 790 795 800
Ser Lys Trp Ser Trp Asp Glu Asp Asn Thr Thr Ser Lys Pro Leu Glu
805 810 815
Ser Thr Glu Pro Ser Ala Ser Ser Lys Leu Pro Pro Ala Leu Leu Thr
820 825 830
Thr Val Gly Met Asn Gly Lys Asp Lys Asp Ile Pro Ser Phe Thr Glu
835 840 845
Asp Gly Ala Asp Glu Phe Thr Leu Ile Pro Asp Ser Thr Gln Lys Gln
850 855 860

Leu Glu Glu Val Thr Asp Glu Asp Ile Ala Ala His Gly Lys Phe Thr
865 870 875 880
Ile Arg Phe Gln Pro Thr Thr Ser Thr Gly Ile Ala Glu Lys Ser Thr
885 890 895
Leu Arg Asp Ser Thr Thr Glu Glu Lys Val Pro Pro Ile Thr Ser Thr
900 905 910
Glu Gly Gln Val Tyr Ala Thr Met Glu Gly Ser Ala Leu Gly Glu Val
915 920 925
Glu Asp Val Asp Leu Ser Lys Pro Val Ser Thr Val Pro Gln Phe Ala
930 935 940
His Thr Ser Glu Val Glu Gly Leu Ala Phe Val Ser Tyr Ser Ser Thr
945 950 955 960
Gln Glu Pro Thr Thr Tyr Val Asp Ser Ser His Thr Ile Pro Leu Ser
965 970 975
Val Ile Pro Lys Thr Asp Trp Gly Val Leu Val Pro Ser Val Pro Ser
980 985 990
Glu Asp Glu Val Leu Gly Glu Pro Ser Gln Asp Ile Leu Val Ile Asp
995 1000 1005
Gln Thr Arg Leu Glu Ala Thr Ile Ser Pro Glu Thr Met Arg Thr
1010 1015 1020
Thr Lys Ile Thr Glu Gly Thr Thr Gln Glu Glu Phe Pro Trp Lys
1025 1030 1035
Glu Gln Thr Ala Glu Lys Pro Val Pro Ala Leu Ser Ser Thr Ala
1040 1045 1050
Trp Thr Pro Lys Glu Ala Val Thr Pro Leu Asp Glu Gln Glu Gly
1055 1060 1065
Asp Gly Ser Ala Tyr Thr Val Ser Glu Asp Glu Leu Leu Thr Gly
1070 1075 1080
Ser Glu Arg Val Pro Val Leu Glu Thr Thr Pro Val Gly Lys Ile
1085 1090 1095
Asp His Ser Val Ser Tyr Pro Pro Gly Ala Val Thr Glu His Lys
1100 1105 1110
Val Lys Thr Asp Glu Val Val Thr Leu Thr Pro Arg Ile Gly Pro
1115 1120 1125
Lys Val Ser Leu Ser Pro Gly Pro Glu Gln Lys Tyr Glu Thr Glu
1130 1135 1140
Gly Ser Ser Thr Thr Gly Phe Thr Ser Ser Leu Ser Pro Phe Ser
1145 1150 1155
Thr His Ile Thr Gln Leu Met Glu Glu Thr Thr Thr Glu Lys Thr
1160 1165 1170
Ser Leu Glu Asp Ile Asp Leu Gly Ser Gly Leu Phe Glu Lys Pro
1175 1180 1185
Lys Ala Thr Glu Leu Ile Glu Phe Ser Thr Ile Lys Val Thr Val
1190 1195 1200
Pro Ser Asp Ile Thr Thr Ala Phe Ser Ser Val Asp Arg Leu His
1205 1210 1215
Thr Thr Ser Ala Phe Lys Pro Ser Ser Ala Ile Thr Lys Lys Pro
1220 1225 1230
Pro Leu Ile Asp Arg Glu Pro Gly Glu Glu Thr Thr Ser Asp Met
1235 1240 1245
Val Ile Ile Gly Glu Ser Thr Ser His Val Pro Pro Thr Thr Leu
1250 1255 1260
Glu Asp Ile Val Ala Lys Glu Thr Glu Thr Asp Ile Asp Arg Glu
1265 1270 1275
Tyr Phe Thr Thr Ser Ser Pro Pro Ala Thr Gln Pro Thr Arg Pro
1280 1285 1290
Pro Thr Val Glu Asp Lys Glu Ala Phe Gly Pro Gln Ala Leu Ser
1295 1300 1305
Thr Pro Gln Pro Pro Ala Ser Thr Lys Phe His Pro Asp Ile Asn
1310 1315 1320
Val Tyr Ile Ile Glu Val Arg Glu Asn Lys Thr Gly Arg Met Ser
1325 1330 1335
Asp Leu Ser Val Ile Gly His Pro Ile Asp Ser Glu Ser Lys Glu
1340 1345 1350
Asp Glu Pro Cys Ser Glu Glu Thr Asp Pro Val His Asp Leu Met
1355 1360 1365
Ala Glu Ile Leu Pro Glu Phe Pro Asp Ile Ile Glu Ile Asp Leu
1370 1375 1380
Tyr His Ser Glu Glu Asn Glu Glu Glu Glu Glu Glu Cys Ala Asn

1385 1390 1395
Ala Thr Asp Val Thr Thr Thr Pro Ser Val Gln Tyr Ile Asn Gly
1400 1405 1410
Lys His Leu Val Thr Thr Val Pro Lys Asp Pro Glu Ala Ala Glu
1415 1420 1425
Ala Arg Arg Gly Gln Phe Glu Ser Val Ala Pro Ser Gln Asn Phe
1430 1435 1440
Ser Asp Ser Ser Glu Ser Asp Thr His Pro Phe Val Ile Ala Lys
1445 1450 1455
Thr Glu Leu Ser Thr Ala Val Gln Pro Asn Glu Ser Thr Glu Thr
1460 1465 1470
Thr Glu Ser Leu Glu Val Thr Trp Lys Pro Glu Thr Tyr Pro Glu
1475 1480 1485
Thr Ser Glu His Phe Ser Gly Gly Glu Pro Asp Val Phe Pro Thr
1490 1495 1500
Val Pro Phe His Glu Glu Phe Glu Ser Gly Thr Ala Lys Lys Gly
1505 1510 1515
Ala Glu Ser Val Thr Glu Arg Asp Thr Glu Val Gly His Gln Ala
1520 1525 1530
His Glu His Thr Glu Pro Val Ser Leu Phe Pro Glu Glu Ser Ser
1535 1540 1545
Gly Glu Ile Ala Ile Asp Gln Glu Ser Gln Lys Ile Ala Phe Ala
1550 1555 1560
Arg Ala Thr Glu Val Thr Phe Gly Glu Glu Val Glu Lys Ser Thr
1565 1570 1575
Ser Val Thr Tyr Thr Pro Thr Ile Val Pro Ser Ser Ala Ser Ala
1580 1585 1590
Tyr Val Ser Glu Glu Glu Ala Val Thr Leu Ile Gly Asn Pro Trp
1595 1600 1605
Pro Asp Asp Leu Leu Ser Thr Lys Glu Ser Trp Val Glu Ala Thr
1610 1615 1620
Pro Arg Gln Val Val Glu Leu Ser Gly Ser Ser Ser Ile Pro Ile
1625 1630 1635
Thr Glu Gly Ser Gly Glu Ala Glu Glu Asp Glu Asp Thr Met Phe
1640 1645 1650
Thr Met Val Thr Asp Leu Ser Gln Arg Asn Thr Thr Asp Thr Leu
1655 1660 1665
Ile Thr Leu Asp Thr Ser Arg Ile Ile Thr Glu Ser Phe Phe Glu
1670 1675 1680
Val Pro Ala Thr Thr Ile Tyr Pro Val Ser Glu Gln Pro Ser Ala
1685 1690 1695
Lys Val Val Pro Thr Lys Phe Val Ser Glu Thr Asp Thr Ser Glu
1700 1705 1710
Trp Ile Ser Ser Thr Thr Val Glu Glu Lys Lys Arg Lys Glu Glu
1715 1720 1725
Glu Gly Thr Thr Gly Thr Ala Ser Thr Phe Glu Val Tyr Ser Ser
1730 1735 1740
Thr Gln Arg Ser Asp Gln Leu Ile Leu Pro Phe Glu Leu Glu Ser
1745 1750 1755
Pro Asn Val Ala Thr Ser Ser Asp Ser Gly Thr Arg Lys Ser Phe
1760 1765 1770
Met Ser Leu Thr Thr Pro Thr Gln Ser Glu Arg Glu Met Thr Asp
1775 1780 1785
Ser Thr Pro Val Phe Thr Glu Thr Asn Thr Leu Glu Asn Leu Gly
1790 1795 1800
Ala Gln Thr Thr Glu His Ser Ser Ile His Gln Pro Gly Val Gln
1805 1810 1815
Glu Gly Leu Thr Thr Leu Pro Arg Ser Pro Ala Ser Val Phe Met
1820 1825 1830
Glu Gln Gly Ser Gly Glu Ala Ala Ala Asp Pro Glu Thr Thr Thr
1835 1840 1845
Val Ser Ser Phe Ser Leu Asn Val Glu Tyr Ala Ile Gln Ala Glu
1850 1855 1860
Lys Glu Val Ala Gly Thr Leu Ser Pro His Val Glu Thr Thr Phe
1865 1870 1875
Ser Thr Glu Pro Thr Gly Leu Val Leu Ser Thr Val Met Asp Arg
1880 1885 1890
Val Val Ala Glu Asn Ile Thr Gln Thr Ser Arg Glu Ile Val Ile
1895 1900 1905

Ser Glu Arg Leu Gly Glu Pro Asn Tyr Gly Ala Glu Ile Arg Gly
1910 1915 1920
Phe Ser Thr Gly Phe Pro Leu Glu Glu Asp Phe Ser Gly Asp Phe
1925 1930 1935
Arg Glu Tyr Ser Thr Val Ser His Pro Ile Ala Lys Glu Glu Thr
1940 1945 1950
Val Met Met Glu Gly Ser Gly Asp Ala Ala Phe Arg Asp Thr Gln
1955 1960 1965
Thr Ser Pro Ser Thr Val Pro Thr Ser Val His Ile Ser His Ile
1970 1975 1980
Ser Asp Ser Glu Gly Pro Ser Ser Thr Met Val Ser Thr Ser Ala
1985 1990 1995
Phe Pro Trp Glu Glu Phe Thr Ser Ser Ala Glu Gly Ser Gly Glu
2000 2005 2010
Gln Leu Val Thr Val Ser Ser Ser Val Val Pro Val Leu Pro Ser
2015 2020 2025
Ala Val Gln Lys Phe Ser Gly Thr Ala Ser Ser Ile Ile Asp Glu
2030 2035 2040
Gly Leu Gly Glu Val Gly Thr Val Asn Glu Ile Asp Arg Arg Ser
2045 2050 2055
Thr Ile Leu Pro Thr Ala Glu Val Glu Gly Thr Lys Ala Pro Val
2060 2065 2070
Glu Lys Glu Glu Val Lys Val Ser Gly Thr Val Ser Thr Asn Phe
2075 2080 2085
Pro Gln Thr Ile Glu Pro Ala Lys Leu Trp Ser Arg Gln Glu Val
2090 2095 2100
Asn Pro Val Arg Gln Glu Ile Glu Ser Glu Thr Thr Ser Glu Glu
2105 2110 2115
Gln Ile Gln Glu Glu Lys Ser Phe Glu Ser Pro Gln Asn Ser Pro
2120 2125 2130
Ala Thr Glu Gln Thr Ile Phe Asp Ser Gln Thr Phe Thr Glu Thr
2135 2140 2145
Glu Leu Lys Thr Thr Asp Tyr Ser Val Leu Thr Thr Lys Lys Thr
2150 2155 2160
Tyr Ser Asp Asp Lys Glu Met Lys Glu Glu Asp Thr Ser Leu Val
2165 2170 2175
Asn Met Ser Thr Pro Asp Pro Asp Ala Asn Gly Leu Glu Ser Tyr
2180 2185 2190
Thr Thr Leu Pro Glu Ala Thr Glu Lys Ser His Phe Phe Leu Ala
2195 2200 2205
Thr Ala Leu Val Thr Glu Ser Ile Pro Ala Glu His Val Val Thr
2210 2215 2220
Asp Ser Pro Ile Lys Lys Glu Glu Ser Thr Lys His Phe Pro Lys
2225 2230 2235
Gly Met Arg Pro Thr Ile Gln Glu Ser Asp Thr Glu Leu Leu Phe
2240 2245 2250
Ser Gly Leu Gly Ser Gly Glu Glu Val Leu Pro Thr Leu Pro Thr
2255 2260 2265
Glu Ser Val Asn Phe Thr Glu Val Glu Gln Ile Asn Asn Thr Leu
2270 2275 2280
Tyr Pro His Thr Ser Gln Val Glu Ser Thr Ser Ser Asp Lys Ile
2285 2290 2295
Glu Asp Phe Asn Arg Met Glu Asn Val Ala Lys Glu Val Gly Pro
2300 2305 2310
Leu Val Ser Gln Thr Asp Ile Phe Glu Gly Ser Gly Ser Val Thr
2315 2320 2325
Ser Thr Thr Leu Ile Glu Ile Leu Ser Asp Thr Gly Ala Glu Gly
2330 2335 2340
Pro Thr Val Ala Pro Leu Pro Phe Ser Thr Asp Ile Gly His Pro
2345 2350 2355
Gln Asn Gln Thr Val Arg Trp Ala Glu Glu Ile Gln Thr Ser Arg
2360 2365 2370
Pro Gln Thr Ile Thr Glu Gln Asp Ser Asn Lys Asn Ser Ser Thr
2375 2380 2385
Ala Glu Ile Asn Glu Thr Thr Thr Ser Ser Thr Asp Phe Leu Ala
2390 2395 2400
Arg Ala Tyr Gly Phe Glu Met Ala Lys Glu Phe Val Thr Ser Ala
2405 2410 2415
Pro Lys Pro Ser Asp Leu Tyr Tyr Glu Pro Ser Gly Glu Gly Ser

2420 2425 2430
Gly Glu Val Asp Ile Val Asp Ser Phe His Thr Ser Ala Thr Thr
2435 2440 2445
Gln Ala Thr Arg Gln Glu Ser Ser Thr Thr Phe Val Ser Asp Gly
2450 2455 2460
Ser Leu Glu Lys His Pro Glu Val Pro Ser Ala Lys Ala Val Thr
2465 2470 2475
Ala Asp Gly Phe Pro Thr Val Ser Val Met Leu Pro Leu His Ser
2480 2485 2490
Glu Gln Asn Lys Ser Ser Pro Asp Pro Thr Ser Thr Leu Ser Asn
2495 2500 2505
Thr Val Ser Tyr Glu Arg Ser Thr Asp Gly Ser Phe Gln Asp Arg
2510 2515 2520
Phe Arg Glu Phe Glu Asp Ser Thr Leu Lys Pro Asn Arg Lys Lys
2525 2530 2535
Pro Thr Glu Asn Ile Ile Ile Asp Leu Asp Lys Glu Asp Lys Asp
2540 2545 2550
Leu Ile Leu Thr Ile Thr Glu Ser Thr Ile Leu Glu Ile Leu Pro
2555 2560 2565
Glu Leu Thr Ser Asp Lys Asn Thr Ile Ile Asp Ile Asp His Thr
2570 2575 2580
Lys Pro Val Tyr Glu Asp Ile Leu Gly Met Gln Thr Asp Ile Asp
2585 2590 2595
Thr Glu Val Pro Ser Glu Pro His Asp Ser Asn Asp Glu Ser Asn
2600 2605 2610
Asp Asp Ser Thr Gln Val Gln Glu Ile Tyr Glu Ala Ala Val Asn
2615 2620 2625
Leu Ser Leu Thr Glu Glu Thr Phe Glu Gly Ser Ala Asp Val Leu
2630 2635 2640
Ala Ser Tyr Thr Gln Ala Thr His Asp Glu Ser Met Thr Tyr Glu
2645 2650 2655
Asp Arg Ser Gln Leu Asp His Met Gly Phe His Phe Thr Thr Gly
2660 2665 2670
Ile Pro Ala Pro Ser Thr Glu Thr Glu Leu Asp Val Leu Leu Pro
2675 2680 2685
Thr Ala Thr Ser Leu Pro Ile Pro Arg Lys Ser Ala Thr Val Ile
2690 2695 2700
Pro Glu Ile Glu Gly Ile Lys Ala Glu Ala Lys Ala Leu Asp Asp
2705 2710 2715
Met Phe Glu Ser Ser Thr Leu Ser Asp Gly Gln Ala Ile Ala Asp
2720 2725 2730
Gln Ser Glu Ile Ile Pro Thr Leu Gly Gln Phe Glu Arg Thr Gln
2735 2740 2745
Glu Glu Tyr Glu Asp Lys Lys His Ala Gly Pro Ser Phe Gln Pro
2750 2755 2760
Glu Phe Ser Ser Gly Ala Glu Glu Ala Leu Val Asp His Thr Pro
2765 2770 2775
Tyr Leu Ser Ile Ala Thr Thr His Leu Met Asp Gln Ser Val Thr
2780 2785 2790
Glu Val Pro Asp Val Met Glu Gly Ser Asn Pro Pro Tyr Tyr Thr
2795 2800 2805
Asp Thr Thr Leu Ala Val Ser Thr Phe Ala Lys Leu Ser Ser Gln
2810 2815 2820
Thr Pro Ser Ser Pro Leu Thr Ile Tyr Ser Gly Ser Glu Ala Ser
2825 2830 2835
Gly His Thr Glu Ile Pro Gln Pro Ser Ala Leu Pro Gly Ile Asp
2840 2845 2850
Val Gly Ser Ser Val Met Ser Pro Gln Asp Ser Phe Lys Glu Ile
2855 2860 2865
His Val Asn Ile Glu Ala Thr Phe Lys Pro Ser Ser Glu Glu Tyr
2870 2875 2880
Leu His Ile Thr Glu Pro Pro Ser Leu Ser Pro Asp Thr Lys Leu
2885 2890 2895
Glu Pro Ser Glu Asp Asp Gly Lys Pro Glu Leu Leu Glu Glu Met
2900 2905 2910
Glu Ala Ser Pro Thr Glu Leu Ile Ala Val Glu Gly Thr Glu Ile
2915 2920 2925
Leu Gln Asp Phe Gln Asn Lys Thr Asp Gly Gln Val Ser Gly Glu
2930 2935 2940

```
Ala Ile  Lys Met Phe Pro Thr  Ile Lys Thr Pro Glu  Ala Gly Thr
    2945                 2950                 2955
Val Ile  Thr Thr Ala Asp Glu  Ile Glu Leu Glu Gly  Ala Thr Gln
    2960                 2965                 2970
Trp Pro  His Ser Thr Ser Ala  Ser Ala Thr Tyr Gly  Val Glu Ala
    2975                 2980                 2985
Gly Val  Val Pro Trp Leu Ser  Pro Gln Thr Ser Glu  Arg Pro Thr
    2990                 2995                 3000
Leu Ser  Ser Ser Pro Glu Ile  Asn Pro Glu Thr Gln  Ala Ala Leu
    3005                 3010                 3015
Ile Arg  Gly Gln Asp Ser Thr  Ile Ala Ala Ser Glu  Gln Gln Val
    3020                 3025                 3030
Ala Ala  Arg Ile Leu Asp Ser  Asn Asp Gln Ala Thr  Val Asn Pro
    3035                 3040                 3045
Val Glu  Phe Asn Thr Glu Val  Ala Thr Pro Pro Phe  Ser Leu Leu
    3050                 3055                 3060
Glu Thr  Ser Asn Glu Thr Asp  Phe Leu Ile Gly Ile  Asn Glu Glu
    3065                 3070                 3075
Ser Val  Glu Gly Thr Ala Ile  Tyr Leu Pro Gly Pro  Asp Arg Cys
    3080                 3085                 3090
Lys Met  Asn Pro Cys Leu Asn  Gly Gly Thr Cys Tyr  Pro Thr Glu
    3095                 3100                 3105
Thr Ser  Tyr Val Cys Thr Cys  Val Pro Gly Tyr Ser  Gly Asp Gln
    3110                 3115                 3120
Cys Glu  Leu Asp Phe Asp Glu  Cys His Ser Asn Pro  Cys Arg Asn
    3125                 3130                 3135
Gly Ala  Thr Cys Val Asp Gly  Phe Asn Thr Phe Arg  Cys Leu Cys
    3140                 3145                 3150
Leu Pro  Ser Tyr Val Gly Ala  Leu Cys Glu Gln Asp  Thr Glu Thr
    3155                 3160                 3165
Cys Asp  Tyr Gly Trp His Lys  Phe Gln Gly Gln Cys  Tyr Lys Tyr
    3170                 3175                 3180
Phe Ala  His Arg Arg Thr Trp  Asp Ala Ala Glu Arg  Glu Cys Arg
    3185                 3190                 3195
Leu Gln  Gly Ala His Leu Thr  Ser Ile Leu Ser His  Glu Glu Gln
    3200                 3205                 3210
Met Phe  Val Asn Arg Val Gly  His Asp Tyr Gln Trp  Ile Gly Leu
    3215                 3220                 3225
Asn Asp  Lys Met Phe Glu His  Asp Phe Arg Trp Thr  Asp Gly Ser
    3230                 3235                 3240
Thr Leu  Gln Tyr Glu Asn Trp  Arg Pro Asn Gln Pro  Asp Ser Phe
    3245                 3250                 3255
Phe Ser  Ala Gly Glu Asp Cys  Val Val Ile Ile Trp  His Glu Asn
    3260                 3265                 3270
Gly Gln  Trp Asn Asp Val Pro  Cys Asn Tyr His Leu  Thr Tyr Thr
    3275                 3280                 3285
Cys Lys  Lys Gly Thr Val Ala  Cys Gly Gln Pro Pro  Val Val Glu
    3290                 3295                 3300
Asn Ala  Lys Thr Phe Gly Lys  Met Lys Pro Arg Tyr  Glu Ile Asn
    3305                 3310                 3315
Ser Leu  Ile Arg Tyr His Cys  Lys Asp Gly Phe Ile  Gln Arg His
    3320                 3325                 3330
Leu Pro  Thr Ile Arg Cys Leu  Gly Asn Gly Arg Trp  Ala Ile Pro
    3335                 3340                 3345
Lys Ile  Thr Cys Met Asn Pro  Ser Ala Tyr Gln Arg  Thr Tyr Ser
    3350                 3355                 3360
Met Lys  Tyr Phe Lys Asn Ser  Ser Ser Ala Lys Asp  Asn Ser Ile
    3365                 3370                 3375
Asn Thr  Ser Lys His Asp His  Arg Trp Ser Arg Arg  Trp Gln Glu
    3380                 3385                 3390
Ser Arg  Arg
    3395
```

<210> 286
<211> 148
<212> PRT
<213> Homo sapiens
<400> 286

```
Met Met His Leu Leu Asn Ser Gln Gly Trp Asn Glu Pro Ala Gly Pro
```

```
1               5                   10                  15
Pro Glu Ser Trp Ser Gly Val Gln Ser Ser Val Phe Leu Ser Val Tyr
            20                  25                  30
Ser Ser Leu Thr Val Pro Arg Pro Ser Gly Val Gly Ala Gly Ser Gln
        35                  40                  45
Cys Trp Arg Arg Asn Asn Lys Ser Gln Leu Glu Pro Leu Phe Leu Lys
    50                  55                  60
Ser Ala Tyr Cys Ala Gln Ile Leu Phe Lys His Trp Thr Trp Ile Leu
65                  70                  75                  80
Ser Leu Ala Leu Ser Thr Pro Ala Val Gly Val Pro Pro Leu Pro Thr
                85                  90                  95
Cys Asp Gly Val Gln Arg His Leu Leu Phe Cys Met Val Phe Asn Arg
            100                 105                 110
Leu Gly Val Leu Phe Ile Ser Ser Asn Phe Val Gln Glu Leu Met Ala
        115                 120                 125
Cys Leu Gly Leu Ser Ser Leu Asn Gln Arg Lys Trp Lys Pro Phe Pro
    130                 135                 140
Cys Cys Ser Pro
145
```

<210> 287
<211> 449
<212> PRT
<213> Homo sapiens
<400> 287

```
Met Leu Trp Lys Leu Val Glu Asn Val Lys Tyr Glu Asp Ile Tyr Glu
1               5                   10                  15
Asp Arg His Asp Gly Val Pro Ser His Ser Ser Arg Leu Ser Gln Leu
            20                  25                  30
Gly Ser Val Ser Gln Gly Pro Tyr Ser Ser Ala Pro Pro Leu Ser His
        35                  40                  45
Thr Pro Ser Ser Asp Phe Gln Pro Pro Tyr Phe Pro Pro Pro Tyr Gln
    50                  55                  60
Pro Leu Pro Tyr His Gln Ser Gln Asp Pro Tyr Ser His Val Asn Asp
65                  70                  75                  80
Pro Tyr Ser Leu Asn Pro Leu His Gln Pro Gln Gln His Pro Trp Gly
                85                  90                  95
Gln Arg Gln Arg Gln Glu Val Gly Ser Glu Ala Gly Ser Leu Leu Pro
            100                 105                 110
Gln Pro Arg Ala Ala Leu Pro Gln Leu Ser Gly Leu Asp Pro Arg Arg
        115                 120                 125
Asp Tyr His Ser Val Arg Arg Pro Asp Val Leu Leu His Ser Ala His
    130                 135                 140
His Gly Leu Asp Ala Gly Met Gly Asp Ser Leu Ser Leu His Gly Leu
145                 150                 155                 160
Gly His Pro Gly Met Glu Asp Val Gln Ser Val Glu Asp Ala Asn Asn
                165                 170                 175
Ser Gly Met Asn Leu Leu Asp Gln Ser Val Ile Lys Lys Val Pro Val
            180                 185                 190
Pro Pro Lys Ser Val Thr Ser Leu Met Met Asn Lys Asp Gly Phe Leu
        195                 200                 205
Gly Gly Met Ser Val Asn Thr Gly Glu Val Phe Cys Ser Val Pro Gly
    210                 215                 220
Arg Leu Ser Leu Leu Ser Ser Thr Ser Lys Tyr Lys Val Thr Val Gly
225                 230                 235                 240
Glu Val Gln Arg Arg Leu Ser Pro Pro Glu Cys Leu Asn Ala Ser Leu
                245                 250                 255
Leu Gly Gly Val Leu Arg Arg Ala Lys Ser Lys Asn Gly Gly Arg Ser
            260                 265                 270
Leu Arg Glu Arg Leu Glu Lys Ile Gly Leu Asn Leu Pro Ala Gly Arg
        275                 280                 285
Arg Lys Ala Ala Asn Val Thr Leu Leu Thr Ser Leu Val Glu Gly Glu
    290                 295                 300
Ala Val His Leu Ala Arg Asp Phe Gly Tyr Ile Cys Glu Thr Glu Phe
305                 310                 315                 320
Pro Ala Lys Ala Val Ser Glu Tyr Leu Asn Arg Gln His Thr Asp Pro
                325                 330                 335
Ser Asp Leu His Ser Arg Lys Asn Met Leu Leu Ala Thr Lys Gln Leu
            340                 345                 350
```

```
Cys Lys Glu Phe Thr Asp Leu Leu Ala Gln Asp Arg Thr Pro Ile Gly
        355                 360                 365
Asn Ser Arg Pro Ser Pro Ile Leu Glu Pro Gly Ile Gln Ser Cys Leu
    370                 375                 380
Thr His Phe Ser Leu Ile Thr His Gly Phe Gly Ala Pro Ala Ile Cys
385                 390                 395                 400
Ala Ala Leu Thr Ala Leu Gln Asn Tyr Leu Thr Glu Ala Leu Lys Gly
                405                 410                 415
Met Asp Lys Met Phe Leu Asn Asn Thr Thr Thr Asn Arg His Thr Ser
            420                 425                 430
Gly Glu Gly Pro Gly Ser Lys Thr Gly Asp Lys Glu Glu Lys His Arg
        435                 440                 445
Lys
```

<210> 288
<211> 114
<212> PRT
<213> Homo sapiens
<400> 288

```
Met Leu Leu Ser Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
1               5                   10                  15
Pro Leu Tyr His Ser Ala Ile Met Asn Pro Cys Phe Cys Gly Phe Leu
            20                  25                  30
Leu Leu Leu Ser Phe Phe Phe Phe Leu Ser Leu Leu Asp Thr Gln Leu
        35                  40                  45
His Asn Leu Ile Ala Leu Gln Met Thr Cys Phe Lys Asp Val Glu Ile
    50                  55                  60
Pro Asn Phe Phe Cys Asp Pro Ser Gln Leu Pro His Leu Ala Cys Cys
65                  70                  75                  80
Asp Thr Phe Thr Asn Asn Ile Ile Val Tyr Phe Pro Ala Val Ile Phe
                85                  90                  95
Val Phe Leu Pro Ile Ser Gly Thr Leu Phe Ser Leu Lys Leu Phe Pro
            100                 105                 110
Pro Phe
```

<210> 289
<211> 195
<212> PRT
<213> Homo sapiens
<400> 289

```
Met Met Ala Ile Arg Glu Leu Lys Val Cys Leu Leu Gly Asp Thr Gly
1               5                   10                  15
Val Gly Lys Ser Ser Ile Val Cys Arg Phe Val Gln Asp His Phe Asp
            20                  25                  30
His Asn Ile Ser Pro Thr Ile Gly Ala Ser Phe Met Thr Lys Thr Val
        35                  40                  45
Pro Cys Gly Asn Glu Leu His Lys Phe Leu Ile Trp Asp Thr Ala Gly
    50                  55                  60
Gln Glu Arg Phe His Ser Leu Ala Pro Met Tyr Tyr Arg Gly Ser Ala
65                  70                  75                  80
Ala Ala Val Ile Val Tyr Asp Ile Thr Lys Gln Asp Ser Phe Tyr Thr
                85                  90                  95
Leu Lys Lys Trp Val Lys Glu Leu Lys Glu His Gly Pro Glu Asn Ile
            100                 105                 110
Val Met Ala Ile Ala Gly Asn Lys Cys Asp Leu Ser Asp Ile Arg Glu
        115                 120                 125
Val Pro Leu Lys Asp Ala Lys Glu Tyr Ala Glu Ser Ile Gly Ala Ile
    130                 135                 140
Val Val Glu Thr Ser Ala Lys Asn Ala Ile Asn Ile Glu Glu Leu Phe
145                 150                 155                 160
Gln Gly Ile Ser Arg Gln Ile Pro Pro Leu Asp Pro His Glu Asn Gly
                165                 170                 175
Asn Asn Gly Thr Ile Lys Val Glu Lys Pro Thr Met Gln Ala Ser Arg
            180                 185                 190
Arg Cys Cys
        195
```

<210> 290
<211> 270
<212> PRT
<213> Homo sapiens
<400> 290

```
Met Ala Ala Ser Ser Ser Gly Glu Lys Glu Lys Glu Arg Leu Gly Gly
1               5                  10                  15
Gly Leu Gly Val Ala Gly Gly Asn Ser Thr Arg Glu Arg Leu Leu Ser
            20                  25                  30
Ala Leu Glu Asp Leu Glu Val Leu Ser Arg Glu Leu Ile Glu Met Leu
        35                  40                  45
Ala Ile Ser Arg Asn Gln Lys Leu Leu Gln Ala Gly Glu Glu Asn Gln
    50                  55                  60
Val Leu Glu Leu Leu Ile His Arg Asp Gly Glu Phe Gln Glu Leu Met
65                  70                  75                  80
Lys Leu Ala Leu Asn Gln Gly Lys Ile His His Glu Met Gln Val Leu
                85                  90                  95
Glu Lys Glu Val Glu Lys Arg Asp Ser Asp Ile Gln Gln Leu Gln Lys
            100                 105                 110
Gln Leu Lys Glu Ala Glu Gln Ile Leu Ala Thr Ala Val Tyr Gln Ala
        115                 120                 125
Lys Glu Lys Leu Lys Ser Ile Glu Lys Ala Arg Lys Gly Ala Ile Ser
    130                 135                 140
Ser Glu Glu Ile Ile Lys Tyr Ala His Arg Ile Ser Ala Ser Asn Ala
145                 150                 155                 160
Val Cys Ala Pro Leu Thr Trp Val Pro Gly Asp Pro Arg Arg Pro Tyr
                165                 170                 175
Pro Thr Asp Leu Glu Met Arg Ser Gly Leu Leu Gly Gln Met Asn Asn
            180                 185                 190
Pro Ser Thr Asn Gly Val Asn Gly His Leu Pro Gly Asp Ala Leu Ala
        195                 200                 205
Ala Gly Arg Leu Pro Asp Val Leu Ala Pro Gln Tyr Pro Trp Gln Ser
    210                 215                 220
Asn Asp Met Ser Met Asn Met Leu Pro Pro Asn His Ser Ser Asp Phe
225                 230                 235                 240
Leu Leu Glu Pro Pro Gly His Asn Lys Glu Asn Glu Asp Asp Val Glu
                245                 250                 255
Ile Met Ser Thr Asp Ser Ser Ser Ser Ser Ser Glu Ser Asp
            260                 265                 270
```

<210> 291
<211> 228
<212> PRT
<213> Homo sapiens
<400> 291

```
Met Leu Ser Arg Cys Arg Ser Gly Leu Leu His Val Leu Gly Leu Ser
1               5                  10                  15
Phe Leu Leu Gln Thr Arg Arg Pro Ile Leu Leu Cys Ser Pro Arg Leu
            20                  25                  30
Met Lys Pro Leu Val Val Phe Val Leu Gly Gly Pro Gly Ala Gly Lys
        35                  40                  45
Gly Thr Gln Cys Ala Arg Ile Val Glu Lys Tyr Gly Tyr Thr His Leu
    50                  55                  60
Ser Ala Gly Glu Leu Leu Arg Asp Glu Arg Lys Asn Pro Asp Ser Gln
65                  70                  75                  80
Tyr Gly Glu Leu Ile Glu Lys Tyr Ile Lys Glu Gly Lys Ile Val Pro
                85                  90                  95
Val Glu Ile Thr Ile Ser Leu Leu Lys Arg Glu Met Asp Gln Thr Met
            100                 105                 110
Ala Ala Asn Ala Gln Lys Asn Lys Phe Leu Ile Asp Gly Phe Pro Arg
        115                 120                 125
Asn Gln Asp Asn Leu Gln Gly Trp Asn Lys Thr Met Asp Gly Lys Ala
    130                 135                 140
Asp Val Ser Phe Val Leu Phe Phe Asp Cys Asn Asn Glu Ile Cys Ile
145                 150                 155                 160
Glu Arg Cys Leu Glu Arg Gly Lys Ser Ser Gly Arg Ser Asp Asp Asn
                165                 170                 175
Arg Glu Ser Leu Glu Lys Arg Ile Gln Thr Tyr Leu Gln Ser Thr Lys
            180                 185                 190
```

Pro Ile Ile Asp Leu Tyr Glu Glu Met Gly Lys Val Lys Lys Ile Asp
195 200 205
Ala Ser Lys Ser Val Asp Glu Val Phe Asp Glu Val Val Gln Ile Phe
210 215 220
Asp Lys Glu Gly
225

<210> 292
<211> 130
<212> PRT
<213> Homo sapiens
<400> 292
Met Ala Phe Cys Leu Arg Ala Ser Leu Gly Pro Asp Cys Cys Cys Trp
1 5 10 15
Tyr Gln Ser Pro Glu Thr Leu Pro Pro Trp Ser Pro Cys Met Pro Ser
20 25 30
Cys Ser Tyr Cys Leu Val Ala Leu Lys Gln His Ile Ser Thr Val Pro
35 40 45
Gly Arg Ile Val Gly Gly Phe Thr Thr Pro Ala Phe Leu Thr Ser Ser
50 55 60
Ser Ala Gln His Trp Val Pro Leu Pro Ser Phe Pro Ala Gly Ala Ser
65 70 75 80
Trp Ala Thr Val Ser Gly Ser Gly Pro Ala Arg Val Val Leu Leu Phe
85 90 95
Leu Leu Leu Leu Gly Asn His Thr Trp Gln Val Lys Cys Pro Lys His
100 105 110
Leu Val Ser Leu Pro Lys Asn Lys Pro Phe Leu Cys Thr Ser Leu Glu
115 120 125
Ala Arg
130

<210> 293
<211> 460
<212> PRT
<213> Homo sapiens
<400> 293
Met Ala Ser Leu Leu Gln Ser Asp Arg Val Leu Tyr Leu Val Gln Gly
1 5 10 15
Glu Lys Lys Val Arg Ala Pro Leu Ser Gln Leu Tyr Phe Cys Arg Tyr
20 25 30
Cys Ser Glu Leu Arg Ser Leu Glu Cys Val Ser His Glu Val Asp Ser
35 40 45
His Tyr Cys Pro Ser Cys Leu Glu Asn Met Pro Ser Ala Glu Ala Lys
50 55 60
Leu Lys Lys Asn Arg Cys Ala Asn Cys Phe Asp Cys Pro Gly Cys Met
65 70 75 80
His Thr Leu Ser Thr Arg Ala Thr Ser Ile Ser Thr Gln Leu Pro Asp
85 90 95
Asp Pro Ala Lys Thr Thr Met Lys Lys Ala Tyr Tyr Leu Ala Cys Gly
100 105 110
Phe Cys Arg Trp Thr Ser Arg Asp Val Gly Met Ala Asp Lys Ser Val
115 120 125
Ala Ser Gly Gly Trp Gln Glu Pro Glu Asn Pro His Thr Gln Arg Met
130 135 140
Asn Lys Leu Ile Glu Tyr Tyr Gln Gln Leu Ala Gln Lys Glu Lys Val
145 150 155 160
Glu Arg Asp Arg Lys Lys Leu Ala Arg Arg Arg Asn Tyr Met Pro Leu
165 170 175
Ala Phe Ser Asp Lys Tyr Gly Leu Gly Thr Arg Leu Gln Arg Pro Arg
180 185 190
Ala Gly Ala Ser Ile Ser Thr Leu Ala Gly Leu Ser Leu Lys Glu Gly
195 200 205
Glu Asp Gln Lys Glu Ile Lys Ile Glu Pro Ala Gln Ala Val Asp Glu
210 215 220
Val Glu Pro Leu Pro Glu Asp Tyr Tyr Thr Arg Pro Val Asn Leu Thr
225 230 235 240
Glu Val Thr Thr Leu Gln Gln Arg Leu Leu Gln Pro Asp Phe Gln Pro
245 250 255
Val Cys Ala Ser Gln Leu Tyr Pro Arg His Lys His Leu Leu Ile Lys

```
            260                 265                 270
Arg Ser Leu Arg Cys Arg Lys Cys Glu His Asn Leu Ser Lys Pro Glu
        275                 280                 285
Phe Asn Pro Thr Ser Ile Lys Phe Lys Ile Gln Leu Val Ala Val Asn
    290                 295                 300
Tyr Ile Pro Glu Val Arg Ile Met Ser Ile Pro Asn Leu Arg Tyr Met
305                 310                 315                 320
Lys Glu Ser Gln Val Leu Leu Thr Leu Thr Asn Pro Val Glu Asn Leu
                325                 330                 335
Thr His Val Thr Leu Phe Glu Cys Glu Glu Gly Asp Pro Asp Asp Ile
            340                 345                 350
Asn Ser Thr Ala Lys Val Val Val Pro Pro Lys Glu Leu Val Leu Ala
        355                 360                 365
Gly Lys Asp Ala Ala Ala Glu Tyr Asp Glu Leu Ala Glu Pro Gln Asp
    370                 375                 380
Phe Gln Asp Asp Pro Asp Ile Ile Ala Phe Arg Lys Ala Asn Lys Val
385                 390                 395                 400
Gly Ile Phe Ile Lys Val Thr Pro Gln Arg Glu Glu Gly Glu Val Thr
                405                 410                 415
Val Cys Phe Lys Met Lys His Asp Phe Lys Asn Leu Ala Ala Pro Ile
            420                 425                 430
Arg Pro Ile Glu Glu Ser Asp Gln Gly Thr Glu Val Ile Trp Leu Thr
        435                 440                 445
Gln His Val Glu Leu Ser Leu Gly Pro Leu Leu Pro
    450                 455                 460
```

<210> 294
<211> 524
<212> PRT
<213> Homo sapiens
<400> 294

```
Met Thr Ala Glu Asp Ser Thr Ala Ala Met Ser Ser Asp Ser Ala Ala
1               5                   10                  15
Gly Ser Ser Ala Lys Val Pro Glu Gly Val Ala Gly Ala Pro Asn Glu
            20                  25                  30
Ala Ala Leu Leu Ala Leu Met Glu Arg Thr Gly Tyr Ser Met Val Gln
        35                  40                  45
Glu Asn Gly Gln Arg Lys Tyr Gly Gly Pro Pro Pro Gly Trp Glu Gly
    50                  55                  60
Pro His Pro Gln Arg Gly Cys Glu Val Phe Val Gly Lys Ile Pro Arg
65                  70                  75                  80
Asp Val Tyr Glu Asp Glu Leu Val Pro Val Phe Glu Ala Val Gly Arg
                85                  90                  95
Thr Tyr Glu Leu Arg Leu Met Met Asp Phe Asp Gly Lys Asn Arg Gly
            100                 105                 110
Tyr Ala Phe Val Met Tyr Cys His Lys His Glu Ala Lys Arg Ala Val
        115                 120                 125
Arg Glu Leu Asn Asn Tyr Glu Ile Arg Pro Gly Arg Leu Leu Gly Val
    130                 135                 140
Cys Cys Ser Val Asp Asn Cys Arg Leu Phe Ile Gly Gly Ile Pro Lys
145                 150                 155                 160
Met Lys Lys Arg Glu Glu Ile Leu Glu Glu Ile Ala Lys Val Thr Glu
                165                 170                 175
Gly Val Leu Asp Val Ile Val Tyr Ala Ser Ala Ala Asp Lys Met Lys
            180                 185                 190
Asn Arg Gly Phe Ala Phe Val Glu Tyr Glu Ser His Arg Ala Ala Ala
        195                 200                 205
Met Ala Arg Arg Lys Leu Met Pro Gly Arg Ile Gln Leu Trp Gly His
    210                 215                 220
Gln Ile Ala Val Asp Trp Ala Glu Pro Glu Ile Asp Val Asp Glu Asp
225                 230                 235                 240
Val Met Glu Thr Val Lys Ile Leu Tyr Val Arg Asn Leu Met Ile Glu
                245                 250                 255
Thr Thr Glu Asp Thr Ile Lys Lys Ser Phe Gly Gln Phe Asn Pro Gly
            260                 265                 270
Cys Val Glu Arg Val Lys Lys Ile Arg Asp Tyr Ala Phe Val His Phe
        275                 280                 285
Thr Ser Arg Glu Asp Ala Val His Ala Met Asn Asn Leu Asn Gly Thr
    290                 295                 300
```

Glu Leu Glu Gly Ser Cys Leu Glu Val Thr Leu Ala Lys Pro Val Asp
305 310 315 320
Lys Glu Gln Tyr Ser Arg Tyr Gln Lys Ala Ala Arg Gly Gly Gly Ala
325 330 335
Ala Glu Ala Ala Gln Gln Pro Ser Tyr Val Tyr Ser Cys Asp Pro Tyr
340 345 350
Thr Leu Ala Tyr Tyr Gly Tyr Pro Tyr Asn Ala Leu Ile Gly Pro Asn
355 360 365
Arg Asp Tyr Phe Val Lys Val Ala Ile Pro Ala Ile Gly Ala Gln Tyr
370 375 380
Ser Met Phe Pro Ala Ala Pro Ala Pro Lys Met Ile Glu Asp Gly Lys
385 390 395 400
Ile His Thr Val Glu His Met Ile Ser Pro Ile Ala Val Gln Pro Asp
405 410 415
Pro Ala Ser Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala
420 425 430
Ala Val Ile Pro Thr Val Ser Thr Pro Pro Pro Phe Gln Gly Arg Pro
435 440 445
Ile Thr Pro Val Tyr Thr Val Ala Pro Asn Val Gln Arg Ile Pro Thr
450 455 460
Ala Gly Ile Tyr Gly Ala Ser Tyr Val Pro Phe Ala Ala Pro Ala Thr
465 470 475 480
Ala Thr Ile Ala Thr Leu Gln Lys Asn Ala Ala Ala Ala Ala Ala Val
485 490 495
Tyr Gly Gly Tyr Ala Gly Tyr Ile Pro Gln Ala Phe Pro Ala Ala Ala
500 505 510
Ile Gln Val Pro Ile Pro Asp Val Tyr Gln Thr Tyr
515 520

<210> 295
<211> 1232
<212> PRT
<213> Homo sapiens
<400> 295
Met Lys Glu Glu Val Lys Gly Ile Pro Val Arg Val Ala Leu Arg Cys
1 5 10 15
Arg Pro Leu Val Pro Lys Glu Ile Ser Glu Gly Cys Gln Met Cys Leu
20 25 30
Ser Phe Val Pro Gly Glu Pro Gln Val Val Val Gly Thr Asp Lys Ser
35 40 45
Phe Thr Tyr Asp Phe Val Phe Asp Pro Ser Thr Glu Gln Glu Glu Val
50 55 60
Phe Asn Thr Ala Val Ala Pro Leu Ile Lys Gly Val Phe Lys Gly Tyr
65 70 75 80
Asn Ala Thr Val Leu Ala Tyr Gly Gln Thr Gly Ser Gly Lys Thr Tyr
85 90 95
Ser Met Gly Gly Ala Tyr Thr Ala Glu Gln Glu Asn Glu Pro Thr Val
100 105 110
Gly Val Ile Pro Arg Val Ile Gln Leu Leu Phe Lys Glu Ile Asp Lys
115 120 125
Lys Ser Asp Phe Glu Phe Thr Leu Lys Val Ser Tyr Leu Glu Ile Tyr
130 135 140
Asn Glu Glu Ile Leu Asp Leu Leu Cys Pro Ser Arg Glu Lys Ala Gln
145 150 155 160
Ile Asn Ile Arg Glu Asp Pro Lys Glu Gly Ile Lys Ile Val Gly Leu
165 170 175
Thr Glu Lys Thr Val Leu Val Ala Leu Asp Thr Val Ser Cys Leu Glu
180 185 190
Gln Gly Asn Asn Ser Arg Thr Val Ala Ser Thr Ala Met Asn Ser Gln
195 200 205
Ser Ser Arg Ser His Ala Ile Phe Thr Ile Ser Leu Glu Gln Gly Lys
210 215 220
Lys Ser Asp Lys Asn Ser Ser Phe Arg Ser Lys Leu His Leu Val Asp
225 230 235 240
Leu Ala Gly Ser Glu Arg Gln Lys Lys Thr Lys Ala Glu Gly Asp Arg
245 250 255
Leu Lys Glu Gly Ile Asn Ile Asn Arg Gly Leu Leu Cys Leu Gly Asn
260 265 270
Val Ile Ser Ala Leu Gly Asp Asp Lys Lys Gly Gly Phe Ala Pro Tyr

```
        275                 280                 285
Arg Asp Ser Lys Leu Thr Arg Leu Leu Gln Asp Ser Leu Gly Gly Asn
    290                 295                 300
Ser His Thr Leu Met Ile Ala Cys Val Ser Pro Ala Asp Ser Asn Leu
305                 310                 315                 320
Glu Glu Thr Leu Asn Thr Leu Arg Tyr Ala Asp Arg Ala Arg Lys Ile
                325                 330                 335
Lys Asn Lys Pro Ile Val Asn Ile Asp Pro Gln Thr Ala Glu Leu Asn
            340                 345                 350
His Leu Lys Gln Gln Val Gln Gln Leu Gln Val Leu Leu Leu Gln Ala
        355                 360                 365
His Gly Gly Thr Leu Pro Gly Ser Ile Thr Val Glu Pro Ser Glu Asn
    370                 375                 380
Leu Gln Ser Leu Met Glu Lys Asn Gln Ser Leu Val Glu Glu Asn Glu
385                 390                 395                 400
Lys Leu Ser Arg Gly Leu Ser Glu Ala Ala Gly Gln Thr Ala Gln Met
                405                 410                 415
Leu Glu Arg Ile Ile Trp Thr Glu Gln Ala Asn Glu Lys Met Asn Ala
            420                 425                 430
Lys Leu Glu Glu Leu Arg Gln His Ala Ala Cys Lys Leu Asp Leu Gln
        435                 440                 445
Lys Leu Val Glu Thr Leu Glu Asp Gln Glu Leu Lys Glu Asn Val Glu
    450                 455                 460
Ile Ile Cys Asn Leu Gln Gln Leu Ile Thr Gln Leu Ser Asp Glu Thr
465                 470                 475                 480
Val Ala Cys Met Ala Ala Ala Ile Asp Thr Ala Val Glu Gln Glu Ala
                485                 490                 495
Gln Val Glu Thr Ser Pro Glu Thr Ser Arg Ser Ser Asp Ala Phe Thr
            500                 505                 510
Thr Gln His Ala Leu Arg Gln Ala Gln Met Ser Lys Glu Leu Val Glu
        515                 520                 525
Leu Asn Lys Ala Leu Ala Leu Lys Glu Ala Leu Ala Arg Lys Met Thr
    530                 535                 540
Gln Asn Asp Ser Gln Leu Gln Pro Ile Gln Tyr Gln Tyr Gln Asp Asn
545                 550                 555                 560
Ile Lys Glu Pro Glu Leu Glu Val Ile Asn Leu Gln Lys Glu Lys Glu
                565                 570                 575
Glu Leu Val Leu Glu Leu Gln Thr Ala Lys Lys Asp Ala Asn Gln Ala
            580                 585                 590
Lys Leu Ser Glu Arg Arg Arg Lys Arg Leu Gln Glu Leu Glu Gly Gln
        595                 600                 605
Ile Ala Asp Leu Lys Lys Lys Leu Asn Glu Gln Ser Lys Leu Leu Lys
    610                 615                 620
Leu Lys Glu Ser Thr Glu Arg Thr Val Ser Lys Leu Asn Gln Glu Ile
625                 630                 635                 640
Arg Met Met Lys Asn Gln Arg Val Gln Leu Met Arg Gln Met Lys Glu
                645                 650                 655
Asp Ala Glu Lys Phe Arg Gln Trp Lys Gln Lys Arg Asp Lys Glu Val
            660                 665                 670
Ile Gln Leu Lys Glu Arg Asp Arg Lys Arg Gln Tyr Glu Leu Leu Lys
        675                 680                 685
Leu Glu Arg Asn Phe Gln Lys Gln Ser Asn Val Leu Arg Arg Lys Thr
    690                 695                 700
Glu Glu Ala Ala Ala Ala Asn Lys Arg Leu Lys Asp Ala Leu Gln Lys
705                 710                 715                 720
Gln Arg Glu Val Ala Asp Lys Arg Lys Glu Thr Gln Ser Arg Gly Met
                725                 730                 735
Glu Gly Thr Ala Ala Arg Val Lys Asn Trp Leu Gly Asn Glu Ile Glu
            740                 745                 750
Val Met Val Ser Thr Glu Glu Ala Lys Arg His Leu Asn Asp Leu Leu
        755                 760                 765
Glu Asp Arg Lys Ile Leu Ala Gln Asp Val Ala Gln Leu Lys Glu Lys
    770                 775                 780
Lys Glu Ser Gly Glu Asn Pro Pro Pro Lys Leu Arg Arg Arg Thr Phe
785                 790                 795                 800
Ser Leu Thr Glu Val Arg Gly Gln Val Ser Glu Ser Glu Asp Ser Ile
                805                 810                 815
Thr Lys Gln Ile Glu Ser Leu Glu Thr Glu Met Glu Phe Arg Ser Ala
            820                 825                 830
```

Gln Ile Ala Asp Leu Gln Gln Lys Leu Leu Asp Ala Glu Ser Glu Asp
835 840 845
Arg Pro Lys Gln Arg Trp Glu Asn Ile Ala Thr Ile Leu Glu Ala Lys
850 855 860
Cys Ala Leu Lys Tyr Leu Ile Gly Glu Leu Val Ser Ser Lys Ile Gln
865 870 875 880
Val Ser Lys Leu Glu Ser Ser Leu Lys Gln Ser Lys Thr Ser Cys Ala
885 890 895
Asp Met Gln Lys Met Leu Phe Glu Glu Arg Asn His Phe Ala Glu Ile
900 905 910
Glu Thr Glu Leu Gln Ala Glu Leu Val Arg Met Glu Gln Gln His Gln
915 920 925
Glu Lys Val Leu Tyr Leu Leu Ser Gln Leu Gln Gln Ser Gln Met Ala
930 935 940
Glu Lys Gln Leu Glu Glu Ser Val Ser Glu Lys Glu Gln Gln Leu Leu
945 950 955 960
Ser Thr Leu Lys Cys Gln Asp Glu Glu Leu Glu Lys Met Arg Glu Val
965 970 975
Cys Glu Gln Asn Gln Gln Leu Leu Arg Glu Asn Glu Ile Ile Lys Gln
980 985 990
Lys Leu Thr Leu Leu Gln Val Ala Ser Arg Gln Lys His Leu Pro Lys
995 1000 1005
Asp Thr Leu Leu Ser Pro Asp Ser Ser Phe Glu Tyr Val Gln Pro
1010 1015 1020
Lys Pro Lys Pro Ser Arg Val Lys Glu Lys Phe Leu Glu Gln Ser
1025 1030 1035
Met Asp Ile Glu Asp Leu Lys Tyr Cys Ser Glu His Ser Val Asn
1040 1045 1050
Glu His Glu Asp Gly Asp Gly Asp Asp Asp Glu Gly Asp Asp Glu
1055 1060 1065
Glu Trp Lys Pro Thr Lys Leu Val Asn Val Ser Arg Lys Asn Ile
1070 1075 1080
Gln Gly Cys Ser Cys Lys Gly Trp Cys Gly Asn Lys Gln Cys Gly
1085 1090 1095
Cys Arg Lys Gln Lys Ser Asp Cys Gly Val Asp Cys Cys Cys Asp
1100 1105 1110
Pro Thr Lys Cys Arg Asn Arg Gln Gln Gly Lys Asp Ser Leu Gly
1115 1120 1125
Thr Val Glu Arg Thr Gln Asp Ser Glu Ser Ser Phe Lys Leu Glu
1130 1135 1140
Asp Pro Thr Glu Val Thr Pro Gly Leu Ser Phe Phe Asn Pro Val
1145 1150 1155
Cys Ala Thr Pro Asn Ser Lys Ile Leu Lys Glu Met Cys Asp Val
1160 1165 1170
Glu Gln Val Leu Ser Lys Lys Thr Pro Pro Ala Pro Ser Pro Phe
1175 1180 1185
Asp Leu Pro Glu Leu Lys His Val Ala Thr Glu Tyr Gln Glu Asn
1190 1195 1200
Lys Ala Pro Gly Lys Lys Lys Lys Arg Ala Leu Ala Ser Asn Thr
1205 1210 1215
Ser Phe Phe Ser Gly Cys Ser Pro Ile Glu Glu Glu Ala His
1220 1225 1230

<210> 296
<211> 230
<212> PRT
<213> Homo sapiens
<400> 296
Met Ala Gln Gly Leu Ile Glu Val Glu Arg Lys Phe Leu Pro Gly Pro
1 5 10 15
Gly Thr Glu Glu Arg Leu Gln Glu Leu Gly Gly Thr Leu Glu Tyr Arg
20 25 30
Val Thr Phe Arg Asp Thr Tyr Tyr Asp Thr Pro Glu Leu Ser Leu Met
35 40 45
Gln Ala Asp His Trp Leu Arg Arg Arg Glu Asp Ser Gly Trp Glu Leu
50 55 60
Lys Cys Pro Gly Ala Ala Gly Val Leu Gly Pro His Thr Glu Tyr Lys
65 70 75 80
Glu Leu Thr Ala Glu Pro Thr Ile Val Ala Gln Leu Cys Lys Val Leu

```
                85                  90                  95
Arg Ala Asp Gly Leu Gly Ala Gly Asp Val Ala Ala Val Leu Gly Pro
            100                 105                 110
Leu Gly Leu Gln Glu Val Ala Ser Phe Val Thr Lys Arg Ser Ala Trp
        115                 120                 125
Lys Leu Val Leu Leu Gly Ala Asp Glu Glu Glu Pro Gln Leu Arg Val
    130                 135                 140
Asp Leu Asp Thr Ala Asp Phe Gly Tyr Ala Val Gly Glu Val Glu Ala
145                 150                 155                 160
Leu Val His Glu Glu Ala Glu Val Pro Thr Ala Leu Glu Lys Ile His
                165                 170                 175
Arg Leu Ser Ser Met Leu Gly Val Pro Ala Gln Glu Thr Ala Pro Ala
            180                 185                 190
Lys Leu Ile Val Tyr Leu Gln Arg Phe Arg Pro Gln Asp Tyr Gln Arg
        195                 200                 205
Leu Leu Glu Val Asn Ser Ser Arg Glu Arg Pro Gln Glu Thr Glu Asp
    210                 215                 220
Pro Asp His Cys Leu Gly
225                 230
```

<210> 297
<211> 329
<212> PRT
<213> Homo sapiens
<400> 297

```
Met Ser Gly Val Val Pro Thr Ala Pro Glu Gln Pro Ala Gly Glu Met
1               5                   10                  15
Glu Asn Gln Thr Lys Pro Pro Asp Pro Arg Pro Asp Ala Pro Pro Glu
            20                  25                  30
Tyr Ser Ser His Phe Leu Pro Gly Pro Pro Gly Thr Ala Val Pro Pro
        35                  40                  45
Pro Thr Gly Tyr Pro Gly Gly Leu Pro Met Gly Tyr Tyr Ser Pro Gln
    50                  55                  60
Gln Pro Ser Thr Phe Pro Leu Tyr Gln Pro Val Gly Gly Ile His Pro
65                  70                  75                  80
Val Arg Tyr Gln Pro Gly Lys Tyr Pro Met Pro Asn Gln Ser Val Pro
                85                  90                  95
Ile Thr Trp Met Pro Gly Pro Thr Pro Met Ala Asn Cys Pro Pro Gly
            100                 105                 110
Leu Glu Tyr Leu Val Gln Leu Asp Asn Ile His Val Leu Gln His Phe
        115                 120                 125
Glu Pro Leu Glu Met Met Thr Cys Phe Glu Thr Asn Asn Arg Tyr Asp
    130                 135                 140
Ile Lys Asn Asn Ser Asp Gln Met Val Tyr Val Val Thr Glu Asp Thr
145                 150                 155                 160
Asp Asp Phe Thr Arg Asn Ala Tyr Arg Thr Leu Arg Pro Phe Val Leu
                165                 170                 175
Arg Val Thr Asp Cys Met Gly Arg Glu Ile Met Thr Met Gln Arg Pro
            180                 185                 190
Phe Arg Cys Thr Cys Cys Cys Phe Cys Cys Pro Ser Ala Arg Gln Glu
        195                 200                 205
Leu Glu Val Gln Cys Pro Pro Gly Val Thr Ile Gly Phe Val Ala Glu
    210                 215                 220
His Trp Asn Leu Cys Arg Ala Val Tyr Ser Ile Gln Asn Glu Lys Lys
225                 230                 235                 240
Glu Asn Val Met Arg Val Arg Gly Pro Cys Ser Thr Tyr Gly Cys Gly
                245                 250                 255
Ser Asp Ser Val Phe Glu Val Lys Ser Leu Asp Gly Ile Ser Asn Ile
            260                 265                 270
Gly Ser Ile Ile Arg Lys Trp Asn Gly Leu Leu Ser Ala Met Ala Asp
        275                 280                 285
Ala Asp His Phe Asp Ile His Phe Pro Leu Asp Leu Asp Val Lys Met
    290                 295                 300
Lys Ala Met Ile Phe Gly Ala Cys Phe Leu Ile Asp Phe Met Tyr Phe
305                 310                 315                 320
Glu Arg Ser Pro Pro Gln Arg Ser Arg
                325
```

<210> 298

<211> 323
<212> PRT
<213> Homo sapiens
<400> 298

```
Met Gly Gly Gln Val Ser Ala Ser Asn Ser Phe Ser Arg Leu His Cys
1               5                  10                  15
Arg Asn Ala Asn Glu Asp Trp Met Ser Ala Leu Cys Pro Arg Leu Trp
            20                  25                  30
Asp Val Pro Leu His His Leu Ser Ile Pro Gly Ser His Asp Thr Met
        35                  40                  45
Thr Tyr Cys Leu Asn Lys Lys Ser Pro Ile Ser His Glu Glu Ser Arg
    50                  55                  60
Leu Leu Gln Leu Leu Asn Lys Ala Leu Pro Cys Ile Thr Arg Pro Val
65                  70                  75                  80
Val Leu Lys Trp Ser Val Thr Gln Ala Leu Asp Val Thr Glu Gln Leu
                85                  90                  95
Asp Ala Gly Val Arg Tyr Leu Asp Leu Arg Ile Ala His Met Leu Glu
            100                 105                 110
Gly Ser Glu Lys Asn Leu His Phe Val His Met Val Tyr Thr Thr Ala
        115                 120                 125
Leu Val Glu Asp Thr Leu Thr Glu Ile Ser Glu Trp Leu Glu Arg His
    130                 135                 140
Pro Arg Glu Val Val Ile Leu Ala Cys Arg Asn Phe Glu Gly Leu Ser
145                 150                 155                 160
Glu Asp Leu His Glu Tyr Leu Val Ala Cys Ile Lys Asn Ile Phe Gly
                165                 170                 175
Asp Met Leu Cys Pro Arg Gly Glu Val Pro Thr Leu Arg Gln Leu Trp
            180                 185                 190
Ser Arg Gly Gln Gln Val Ile Val Ser Tyr Glu Asp Glu Ser Ser Leu
        195                 200                 205
Arg Arg His His Glu Leu Trp Pro Gly Val Pro Tyr Trp Trp Gly Asn
    210                 215                 220
Arg Val Lys Thr Glu Ala Leu Ile Arg Tyr Leu Glu Thr Met Lys Ser
225                 230                 235                 240
Cys Gly Arg Pro Gly Gly Leu Phe Val Ala Gly Ile Asn Leu Thr Glu
                245                 250                 255
Asn Leu Gln Tyr Val Leu Ala His Pro Ser Glu Ser Leu Glu Lys Met
            260                 265                 270
Thr Leu Pro Asn Leu Pro Arg Leu Ser Ala Trp Val Arg Glu Gln Cys
        275                 280                 285
Pro Gly Pro Gly Ser Arg Cys Thr Asn Ile Ile Ala Gly Asp Phe Ile
    290                 295                 300
Gly Ala Asp Gly Phe Val Ser Asp Val Ile Ala Leu Asn Gln Lys Leu
305                 310                 315                 320
Leu Trp Cys
```

<210> 299
<211> 103
<212> PRT
<213> Homo sapiens
<400> 299

```
Met Thr Thr Glu Ile Gly Trp Trp Lys Leu Thr Phe Leu Arg Lys Lys
1               5                  10                  15
Lys Ser Thr Pro Lys Val Leu Tyr Glu Ile Pro Asp Thr Tyr Ala Gln
            20                  25                  30
Thr Glu Gly Asp Ala Glu Pro Pro Arg Pro Asp Ala Gly Gly Pro Asn
        35                  40                  45
Ser Asp Phe Asn Thr Arg Leu Glu Lys Ile Val Asp Lys Ser Thr Lys
    50                  55                  60
Gly Lys His Val Lys Val Ser Asn Ser Gly Arg Phe Lys Glu Lys Lys
65                  70                  75                  80
Lys Val Arg Ala Thr Leu Ala Glu Asn Pro Asn Leu Phe Asp Asp His
                85                  90                  95
Glu Glu Gly Arg Ser Ser Lys
            100
```

<210> 300
<211> 999

<212> PRT
<213> Homo sapiens
<400> 300

```
Met Gly Val Ala Gly Arg Asn Arg Pro Gly Ala Ala Trp Ala Val Leu
1               5                  10                  15
Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu Leu Leu Ala Gly Ala Val
            20                  25                  30
Pro Pro Gly Arg Gly Arg Ala Ala Gly Pro Gln Glu Asp Val Asp Glu
        35                  40                  45
Cys Ala Gln Gly Leu Asp Asp Cys His Ala Asp Ala Leu Cys Gln Asn
    50                  55                  60
Thr Pro Thr Ser Tyr Lys Cys Ser Cys Lys Pro Gly Tyr Gln Gly Glu
65                  70                  75                  80
Gly Arg Gln Cys Glu Asp Ile Asp Glu Cys Gly Asn Glu Leu Asn Gly
                85                  90                  95
Gly Cys Val His Asp Cys Leu Asn Ile Pro Gly Asn Tyr Arg Cys Thr
            100                 105                 110
Cys Phe Asp Gly Phe Met Leu Ala His Asp Gly His Asn Cys Leu Asp
        115                 120                 125
Val Asp Glu Cys Leu Glu Asn Asn Gly Gly Cys Gln His Thr Cys Val
    130                 135                 140
Asn Val Met Gly Ser Tyr Glu Cys Cys Cys Lys Glu Gly Phe Phe Leu
145                 150                 155                 160
Ser Asp Asn Gln His Thr Cys Ile His Arg Ser Glu Glu Gly Leu Ser
                165                 170                 175
Cys Met Asn Lys Asp His Gly Cys Ser His Ile Cys Lys Glu Ala Pro
            180                 185                 190
Arg Gly Ser Val Ala Cys Glu Cys Arg Pro Gly Phe Glu Leu Ala Lys
        195                 200                 205
Asn Gln Arg Asp Cys Ile Leu Thr Cys Asn His Gly Asn Gly Gly Cys
    210                 215                 220
Gln His Ser Cys Asp Asp Thr Ala Asp Gly Pro Glu Cys Ser Cys His
225                 230                 235                 240
Pro Gln Tyr Lys Met His Thr Asp Gly Arg Ser Cys Leu Glu Arg Glu
                245                 250                 255
Asp Thr Val Leu Glu Val Thr Glu Ser Asn Thr Thr Ser Val Val Asp
            260                 265                 270
Gly Asp Lys Arg Val Lys Arg Arg Leu Leu Met Glu Thr Cys Ala Val
        275                 280                 285
Asn Asn Gly Gly Cys Asp Arg Thr Cys Lys Asp Thr Ser Thr Gly Val
    290                 295                 300
His Cys Ser Cys Pro Val Gly Phe Thr Leu Gln Leu Asp Gly Lys Thr
305                 310                 315                 320
Cys Lys Asp Ile Asp Glu Cys Gln Thr Arg Asn Gly Gly Cys Asp His
                325                 330                 335
Phe Cys Lys Asn Ile Val Gly Ser Phe Asp Cys Gly Cys Lys Lys Gly
            340                 345                 350
Phe Lys Leu Leu Thr Asp Glu Lys Ser Cys Gln Asp Val Asp Glu Cys
        355                 360                 365
Ser Leu Asp Arg Thr Cys Asp His Ser Cys Ile Asn His Pro Gly Thr
    370                 375                 380
Phe Ala Cys Ala Cys Asn Arg Gly Tyr Thr Leu Tyr Gly Phe Thr His
385                 390                 395                 400
Cys Gly Asp Thr Asn Glu Cys Ser Ile Asn Asn Gly Gly Cys Gln Gln
                405                 410                 415
Val Cys Val Asn Thr Val Gly Ser Tyr Glu Cys Gln Cys His Pro Gly
            420                 425                 430
Tyr Lys Leu His Trp Asn Lys Lys Asp Cys Val Glu Val Lys Gly Leu
        435                 440                 445
Leu Pro Thr Ser Val Ser Pro Arg Val Ser Leu His Cys Gly Lys Ser
    450                 455                 460
Gly Gly Gly Asp Gly Cys Phe Leu Arg Cys His Ser Gly Ile His Leu
465                 470                 475                 480
Ser Ser Asp Val Thr Thr Ile Arg Thr Ser Val Thr Phe Lys Leu Asn
                485                 490                 495
Glu Gly Lys Cys Ser Leu Lys Asn Ala Glu Leu Phe Pro Glu Gly Leu
            500                 505                 510
Arg Pro Ala Leu Pro Glu Lys His Ser Ser Val Lys Glu Ser Phe Arg
        515                 520                 525
```

Tyr Val Asn Leu Thr Cys Ser Ser Gly Lys Gln Val Pro Gly Ala Pro
530 535 540
Gly Arg Pro Ser Thr Pro Lys Glu Met Phe Ile Thr Val Glu Phe Glu
545 550 555 560
Leu Glu Thr Asn Gln Lys Glu Val Thr Ala Ser Cys Asp Leu Ser Cys
565 570 575
Ile Val Lys Arg Thr Glu Lys Arg Leu Arg Lys Ala Ile Arg Thr Leu
580 585 590
Arg Lys Ala Val His Arg Glu Gln Phe His Leu Gln Leu Ser Gly Met
595 600 605
Asn Leu Asp Val Ala Lys Lys Pro Pro Arg Thr Ser Glu Arg Gln Ala
610 615 620
Glu Ser Cys Gly Val Gly Gln Gly His Ala Glu Asn Gln Cys Val Ser
625 630 635 640
Cys Arg Ala Gly Thr Tyr Tyr Asp Gly Ala Arg Glu Arg Cys Ile Leu
645 650 655
Cys Pro Asn Gly Thr Phe Gln Asn Glu Glu Gly Gln Met Thr Cys Glu
660 665 670
Pro Cys Pro Arg Pro Gly Asn Ser Gly Ala Leu Lys Thr Pro Glu Ala
675 680 685
Trp Asn Met Ser Glu Cys Gly Gly Leu Cys Gln Pro Gly Glu Tyr Ser
690 695 700
Ala Asp Gly Phe Ala Pro Cys Gln Leu Cys Ala Leu Gly Thr Phe Gln
705 710 715 720
Pro Glu Ala Gly Arg Thr Ser Cys Phe Pro Cys Gly Gly Gly Leu Ala
725 730 735
Thr Lys His Gln Gly Ala Thr Ser Phe Gln Asp Cys Glu Thr Arg Val
740 745 750
Gln Cys Ser Pro Gly His Phe Tyr Asn Thr Thr Thr His Arg Cys Ile
755 760 765
Arg Cys Pro Val Gly Thr Tyr Gln Pro Glu Phe Gly Lys Asn Asn Cys
770 775 780
Val Ser Cys Pro Gly Asn Thr Thr Thr Asp Phe Asp Gly Ser Thr Asn
785 790 795 800
Ile Thr Gln Cys Lys Asn Arg Arg Cys Gly Gly Glu Leu Gly Asp Phe
805 810 815
Thr Gly Tyr Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn
820 825 830
Thr Glu Cys Thr Trp Thr Ile Asn Pro Pro Pro Lys Arg Arg Ile Leu
835 840 845
Ile Val Val Pro Glu Ile Phe Leu Pro Ile Glu Asp Asp Cys Gly Asp
850 855 860
Tyr Leu Val Met Arg Lys Thr Ser Ser Ser Asn Ser Val Thr Thr Tyr
865 870 875 880
Glu Thr Cys Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ser Arg Ser
885 890 895
Lys Lys Leu Trp Ile Gln Phe Lys Ser Asn Glu Gly Asn Ser Ala Arg
900 905 910
Gly Phe Gln Val Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Gln Glu Leu
915 920 925
Ile Glu Asp Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His
930 935 940
Gln Glu Ile Leu Lys Asp Lys Lys Leu Ile Lys Ala Leu Phe Asp Val
945 950 955 960
Leu Ala His Pro Gln Asn Tyr Phe Lys Tyr Thr Ala Gln Glu Ser Arg
965 970 975
Glu Met Phe Pro Arg Ser Phe Ile Arg Leu Leu Arg Ser Lys Val Ser
980 985 990
Arg Phe Leu Arg Pro Tyr Lys
995

<210> 301
<211> 340
<212> PRT
<213> Homo sapiens
<400> 301
Met Cys Ala Gln Tyr Cys Ile Ser Phe Ala Asp Val Glu Lys Ala His
1 5 10 15
Ile Asn Ile Arg Asp Ser Ile His Leu Thr Pro Val Leu Thr Ser Ser

```
            20                  25                  30
Ile Leu Asn Gln Leu Thr Gly Arg Asn Leu Phe Phe Lys Cys Glu Leu
        35                  40                  45
Phe Gln Lys Thr Gly Ser Phe Lys Ile Arg Gly Ala Leu Asn Ala Val
    50                  55                  60
Arg Ser Leu Val Pro Asp Ala Leu Glu Arg Lys Pro Lys Ala Val Val
65                  70                  75                  80
Thr His Ser Ser Gly Asn His Gly Gln Ala Leu Thr Tyr Ala Ala Lys
                85                  90                  95
Leu Glu Gly Ile Pro Ala Tyr Ile Val Val Pro Gln Thr Ala Pro Asp
            100                 105                 110
Cys Lys Lys Leu Ala Ile Gln Ala Tyr Gly Ala Ser Ile Val Tyr Cys
        115                 120                 125
Glu Pro Ser Asp Glu Ser Arg Glu Asn Val Ala Lys Arg Val Thr Glu
    130                 135                 140
Glu Thr Glu Gly Ile Met Val His Pro Asn Gln Glu Pro Ala Val Ile
145                 150                 155                 160
Ala Gly Gln Gly Thr Ile Ala Leu Glu Val Leu Asn Gln Val Pro Leu
                165                 170                 175
Val Asp Ala Leu Val Val Pro Val Gly Gly Gly Gly Met Leu Ala Gly
            180                 185                 190
Ile Ala Ile Thr Val Lys Ala Leu Lys Pro Ser Val Lys Val Tyr Ala
        195                 200                 205
Ala Glu Pro Ser Asn Ala Asp Asp Cys Tyr Gln Ser Lys Leu Lys Gly
    210                 215                 220
Lys Leu Met Pro Asn Leu Tyr Pro Pro Glu Thr Ile Ala Asp Gly Val
225                 230                 235                 240
Lys Ser Ser Ile Gly Leu Asn Thr Trp Pro Ile Ile Arg Asp Leu Val
                245                 250                 255
Asp Asp Ile Phe Thr Val Thr Glu Asp Glu Ile Lys Cys Ala Thr Gln
            260                 265                 270
Leu Val Trp Glu Arg Met Lys Leu Leu Ile Glu Pro Thr Ala Gly Val
        275                 280                 285
Gly Val Ala Ala Val Leu Ser Gln His Phe Gln Thr Val Ser Pro Glu
    290                 295                 300
Val Lys Asn Ile Cys Ile Val Leu Ser Gly Gly Asn Val Asp Leu Thr
305                 310                 315                 320
Ser Ser Ile Thr Trp Val Lys Gln Ala Glu Arg Pro Ala Ser Tyr Gln
                325                 330                 335
Ser Val Ser Val
            340
```

<210> 302
<211> 218
<212> PRT
<213> Homo sapiens
<400> 302

```
Met Asn Arg Leu Phe Gly Lys Ala Lys Pro Lys Ala Pro Arg Pro Ser
1               5                   10                  15
Leu Thr Asp Cys Ile Gly Thr Val Asp Ser Arg Ala Glu Ser Ile Asp
            20                  25                  30
Lys Lys Ile Ser Arg Leu Asp Ala Glu Leu Val Lys Tyr Lys Asp Gln
        35                  40                  45
Ile Lys Lys Met Arg Glu Gly Pro Ala Lys Asn Met Val Lys Gln Lys
    50                  55                  60
Ala Leu Arg Val Leu Lys Gln Lys Arg Met Tyr Glu Gln Gln Arg Asp
65                  70                  75                  80
Asn Leu Ala Asn Ser His Ser Thr Trp Thr Gly His Tyr Thr Ile Gln
                85                  90                  95
Ser Leu Lys Asp Thr Lys Thr Thr Val Asp Ala Met Lys Leu Gly Val
            100                 105                 110
Lys Glu Met Lys Lys Ala Tyr Lys Pro Val Lys Ile Asp Gln Ile Glu
        115                 120                 125
Asp Leu Gln Asp Gln Leu Glu Asp Met Met Glu Asp Ala Asn Glu Ile
    130                 135                 140
Gln Glu Ala Leu Ser Arg Ser Tyr Gly Thr Pro Glu Leu Asp Glu Asp
145                 150                 155                 160
Asp Leu Glu Ala Glu Leu Asp Ala Leu Gly Asp Glu Leu Leu Ala Asp
                165                 170                 175
```

Glu Asp Ser Ser Tyr Leu Asp Glu Ala Ala Ser Ala Pro Ala Ile Pro
180 185 190
Glu Gly Val Pro Thr Asp Thr Lys Asn Lys Asp Gly Val Leu Val Asp
195 200 205
Glu Phe Gly Leu Pro Gln Ile Pro Ala Ser
210 215

<210> 303
<211> 635
<212> PRT
<213> Homo sapiens
<400> 303
Met Ala Pro Pro Leu Leu Leu Leu Leu Leu Ala Ser Gly Ala Ala Ala
1 5 10 15
Cys Pro Leu Pro Cys Val Cys Gln Asn Leu Ser Glu Ser Leu Ser Thr
20 25 30
Leu Cys Ala His Arg Gly Leu Leu Phe Val Pro Pro Asn Val Asp Arg
35 40 45
Arg Thr Val Glu Leu Arg Leu Ala Asp Asn Phe Ile Gln Ala Leu Gly
50 55 60
Pro Pro Asp Phe Arg Asn Met Thr Gly Leu Val Asp Leu Thr Leu Ser
65 70 75 80
Arg Asn Ala Ile Thr Arg Ile Gly Ala Arg Ala Phe Gly Asp Leu Glu
85 90 95
Ser Leu Arg Ser Leu His Leu Asp Gly Asn Arg Leu Val Glu Leu Gly
100 105 110
Thr Gly Ser Leu Arg Gly Pro Val Asn Leu Gln His Leu Ile Leu Ser
115 120 125
Gly Asn Gln Leu Gly Arg Ile Ala Pro Gly Ala Phe Asp Asp Phe Leu
130 135 140
Glu Ser Leu Glu Asp Leu Asp Leu Ser Tyr Asn Asn Leu Arg Gln Val
145 150 155 160
Pro Trp Ala Gly Ile Gly Ala Met Pro Ala Leu His Thr Leu Asn Leu
165 170 175
Asp His Asn Leu Ile Asp Ala Leu Pro Pro Gly Ala Phe Ala Gln Leu
180 185 190
Gly Gln Leu Ser Arg Leu Asp Leu Thr Ser Asn Arg Leu Ala Thr Leu
195 200 205
Ala Pro Asp Pro Leu Phe Ser Arg Gly Arg Asp Ala Glu Ala Ser Pro
210 215 220
Ala Pro Leu Val Leu Ser Phe Ser Gly Asn Pro Leu His Cys Asn Cys
225 230 235 240
Glu Leu Leu Trp Leu Arg Arg Leu Ala Arg Pro Asp Asp Leu Glu Thr
245 250 255
Cys Ala Ser Pro Pro Gly Leu Ala Gly Arg Tyr Phe Trp Ala Val Pro
260 265 270
Glu Gly Glu Phe Ser Cys Glu Pro Pro Leu Ile Ala Arg His Thr Gln
275 280 285
Arg Leu Trp Val Leu Glu Gly Gln Arg Ala Thr Leu Arg Cys Arg Ala
290 295 300
Leu Gly Asp Pro Ala Pro Thr Met His Trp Val Gly Pro Asp Asp Arg
305 310 315 320
Leu Val Gly Asn Ser Ser Arg Ala Arg Ala Phe Pro Asn Gly Thr Leu
325 330 335
Glu Ile Gly Val Thr Gly Ala Gly Asp Ala Gly Gly Tyr Thr Cys Ile
340 345 350
Ala Thr Asn Pro Ala Gly Glu Ala Thr Ala Arg Val Glu Leu Arg Val
355 360 365
Leu Ala Leu Pro His Gly Gly Asn Ser Ser Ala Glu Gly Gly Arg Pro
370 375 380
Gly Pro Ser Asp Ile Ala Ala Ser Ala Arg Thr Ala Ala Glu Gly Glu
385 390 395 400
Gly Thr Leu Glu Ser Glu Pro Ala Val Gln Val Thr Glu Val Thr Ala
405 410 415
Thr Ser Gly Leu Val Ser Trp Gly Pro Gly Arg Pro Ala Asp Pro Val
420 425 430
Trp Met Phe Gln Ile Gln Tyr Asn Ser Ser Glu Asp Glu Thr Leu Ile
435 440 445
Tyr Arg Ile Val Pro Ala Ser Ser His His Phe Leu Leu Lys His Leu

```
    450                 455                 460
Val Pro Gly Ala Asp Tyr Asp Leu Cys Leu Leu Ala Leu Ser Pro Ala
465                 470                 475                 480
Ala Gly Pro Ser Asp Leu Thr Ala Thr Arg Leu Leu Gly Cys Ala His
                485                 490                 495
Phe Ser Thr Leu Pro Ala Ser Pro Leu Cys His Ala Leu Gln Ala His
            500                 505                 510
Val Leu Gly Gly Thr Leu Thr Val Ala Val Gly Gly Val Leu Val Ala
        515                 520                 525
Ala Leu Leu Val Phe Thr Val Ala Leu Leu Val Arg Gly Arg Gly Ala
    530                 535                 540
Gly Asn Gly Arg Leu Pro Leu Lys Leu Ser His Val Gln Ser Gln Thr
545                 550                 555                 560
Asn Gly Gly Pro Ser Pro Thr Pro Lys Ala His Pro Pro Arg Ser Pro
                565                 570                 575
Pro Pro Arg Pro Gln Arg Ser Cys Ser Leu Asp Leu Gly Asp Ala Gly
            580                 585                 590
Cys Tyr Gly Tyr Ala Arg Arg Leu Gly Gly Ala Trp Ala Arg Arg Ser
        595                 600                 605
His Ser Val His Gly Gly Leu Leu Gly Ala Gly Cys Arg Gly Val Gly
    610                 615                 620
Gly Ser Ala Glu Arg Leu Glu Glu Ser Val Val
625                 630                 635
```

<210> 304
<211> 498
<212> PRT
<213> Homo sapiens
<400> 304

```
Met Asp Val Thr Asp His Tyr Glu Asp Val Arg Lys Ile Tyr Asp Asp
1                 5                  10                  15
Phe Leu Lys Asn Ser Asn Met Leu Asp Leu Ile Asp Val Tyr Gln Lys
            20                  25                  30
Cys Arg Ala Leu Thr Ser Asn Cys Glu Asn Tyr Asn Thr Val Ser Pro
        35                  40                  45
Ser Gln Leu Leu Asp Phe Leu Ser Gly Lys Gln Tyr Ala Val Gly Asp
    50                  55                  60
Glu Thr Asp Leu Ser Ile Pro Thr Ser Pro Thr Ser Lys Tyr Asn Arg
65                  70                  75                  80
Asp Asn Glu Lys Val Gln Leu Leu Ala Arg Lys Ile Ile Phe Ser Tyr
                85                  90                  95
Leu Asn Leu Leu Val Asn Ser Lys Asn Asp Leu Ala Val Ala Tyr Ile
            100                 105                 110
Leu Asn Ile Pro Asp Arg Gly Leu Gly Arg Glu Ala Phe Thr Asp Leu
        115                 120                 125
Lys His Ala Ala Arg Glu Lys Gln Met Ser Ile Phe Leu Val Ala Thr
    130                 135                 140
Ser Phe Ile Arg Thr Ile Glu Leu Gly Gly Lys Gly Tyr Ala Pro Pro
145                 150                 155                 160
Pro Ser Asp Pro Leu Arg Thr His Val Lys Gly Leu Ser Asn Phe Ile
                165                 170                 175
Asn Phe Ile Asp Lys Leu Asp Glu Ile Leu Gly Glu Ile Pro Asn Pro
            180                 185                 190
Ser Ile Ala Gly Gly Gln Ile Leu Ser Val Ile Lys Met Gln Leu Ile
        195                 200                 205
Lys Gly Gln Asn Ser Arg Asp Pro Phe Cys Lys Ala Ile Glu Glu Val
    210                 215                 220
Ala Gln Asp Leu Asp Leu Arg Ile Lys Asn Ile Ile Asn Ser Gln Glu
225                 230                 235                 240
Gly Val Val Ala Leu Ser Thr Thr Asp Ile Ser Pro Ala Arg Pro Lys
                245                 250                 255
Ser His Ala Ile Asn His Gly Thr Ala Tyr Cys Gly Arg Asp Thr Val
            260                 265                 270
Lys Ala Leu Leu Val Leu Leu Asp Glu Glu Ala Ala Asn Ala Pro Thr
        275                 280                 285
Lys Asn Lys Ala Glu Leu Leu Tyr Asp Glu Glu Asp Thr Ile His His
    290                 295                 300
His Gly Thr Ser Ile Leu Thr Leu Phe Arg Ser Pro Thr Gln Val Asn
305                 310                 315                 320
```

Asn Leu Ile Lys Pro Leu Arg Glu Arg Ile Cys Val Ser Met Gln Glu
325 330 335
Lys Lys Ile Lys Met Lys Gln Thr Leu Ile Arg Ser Gln Phe Ala Cys
340 345 350
Thr Tyr Lys Asp Asp Tyr Met Ile Ser Lys Asp Asn Trp Asn Asn Val
355 360 365
Asn Leu Ala Ser Lys Pro Leu Cys Val Leu Tyr Met Glu Asn Asp Leu
370 375 380
Ser Glu Gly Val Asn Pro Ser Val Gly Arg Ser Thr Ile Gly Thr Ser
385 390 395 400
Phe Gly Asn Val His Leu Asp Arg Ser Lys Asn Glu Lys Val Ser Arg
405 410 415
Lys Ser Thr Ser Gln Thr Gly Asn Lys Ser Ser Lys Arg Lys Gln Val
420 425 430
Asp Leu Asp Gly Glu Asn Ile Leu Cys Asp Asn Arg Asn Glu Pro Pro
435 440 445
Gln His Lys Asn Ala Lys Ile Pro Lys Lys Ser Asn Asp Ser Gln Asn
450 455 460
Arg Leu Tyr Gly Lys Leu Ala Lys Val Ala Lys Ser Asn Lys Cys Thr
465 470 475 480
Ala Lys Asp Lys Leu Ile Ser Gly Gln Ala Lys Leu Thr Gln Phe Phe
485 490 495
Arg Leu

<210> 305
<211> 172
<212> PRT
<213> Homo sapiens
<400> 305
Met Arg Asp Ile Ala Ile Leu Lys Glu Lys Gln Glu Lys Glu Ile Gln
1 5 10 15
Thr Leu Gln Glu Glu Thr Lys Lys Val Gln Ala Glu Thr Ala Ser Lys
20 25 30
Thr Arg Glu Val Gln Ala Gln Leu Leu Gln Glu Lys Arg Leu Leu Glu
35 40 45
Lys Gln Leu Ser Glu Pro Asp Arg Arg Leu Leu Gly Lys Arg Lys Arg
50 55 60
Arg Glu Leu Asn Met Lys Ala Gln Ala Leu Lys Leu Ala Ala Lys Arg
65 70 75 80
Phe Ile Phe Glu Tyr Ser Cys Gly Ile Asn Arg Glu Asn Gln Gln Phe
85 90 95
Lys Lys Glu Leu Leu Gln Leu Ile Glu Gln Ala Gln Lys Leu Thr Ala
100 105 110
Thr Gln Ser His Leu Glu Asn Arg Lys Gln Gln Leu Gln Gln Glu Gln
115 120 125
Trp Tyr Leu Glu Ser Leu Ile Gln Ala Arg Gln Arg Leu Gln Gly Ser
130 135 140
His Asn Gln Cys Leu Asn Arg Gln Asp Val Pro Lys Thr Thr Pro Ser
145 150 155 160
Leu Pro Gln Gly Thr Lys Ser Arg Ile Asn Pro Lys
165 170

<210> 306
<211> 330
<212> PRT
<213> Homo sapiens
<400> 306
Met Arg Arg Pro Ser Val Arg Ala Ala Gly Leu Val Leu Cys Thr Leu
1 5 10 15
Cys Tyr Leu Leu Val Gly Ala Ala Val Phe Asp Ala Leu Glu Ser Glu
20 25 30
Ala Glu Ser Gly Arg Gln Arg Leu Leu Val Gln Lys Arg Gly Ala Leu
35 40 45
Arg Arg Lys Phe Gly Phe Ser Ala Glu Asp Tyr Arg Glu Leu Glu Arg
50 55 60
Leu Ala Leu Gln Ala Glu Pro His Arg Ala Gly Arg Gln Trp Lys Phe
65 70 75 80
Pro Gly Ser Phe Tyr Phe Ala Ile Thr Val Ile Thr Thr Ile Gly Tyr

```
                85                  90                  95
Gly His Ala Ala Pro Gly Thr Asp Ser Gly Lys Val Phe Cys Met Phe
            100                 105                 110
Tyr Ala Leu Leu Gly Ile Pro Leu Thr Leu Val Thr Phe Gln Ser Leu
        115                 120                 125
Gly Glu Arg Leu Asn Ala Val Val Arg Arg Leu Leu Leu Ala Ala Lys
    130                 135                 140
Cys Cys Leu Gly Leu Arg Trp Thr Cys Val Ser Thr Glu Asn Leu Val
145                 150                 155                 160
Val Ala Gly Leu Leu Ala Cys Ala Ala Thr Leu Ala Leu Gly Ala Val
                165                 170                 175
Ala Phe Ser His Phe Glu Gly Trp Thr Phe Phe His Ala Tyr Tyr Tyr
            180                 185                 190
Cys Phe Ile Thr Leu Thr Thr Ile Gly Phe Gly Asp Phe Val Ala Leu
        195                 200                 205
Gln Ser Gly Glu Ala Leu Gln Arg Lys Leu Pro Tyr Val Ala Phe Ser
    210                 215                 220
Phe Leu Tyr Ile Leu Leu Gly Leu Thr Val Ile Gly Ala Phe Leu Asn
225                 230                 235                 240
Leu Val Val Leu Arg Phe Leu Val Ala Ser Ala Asp Trp Pro Glu Arg
                245                 250                 255
Ala Ala Arg Pro Pro Ser Pro Arg Pro Pro Gly Ala Pro Glu Ser Arg
            260                 265                 270
Gly Leu Trp Leu Pro Arg Arg Pro Ala Arg Ser Val Gly Ser Ala Ser
        275                 280                 285
Val Phe Cys His Val His Lys Leu Glu Arg Cys Ala Arg Asp Asn Leu
    290                 295                 300
Gly Phe Ser Pro Pro Ser Ser Pro Gly Val Val Arg Gly Gly Gln Ala
305                 310                 315                 320
Pro Arg Pro Gly Ala Arg Trp Lys Ser Ile
                325                 330
```

<210> 307
<211> 741
<212> PRT
<213> Homo sapiens
<400> 307

```
Met Glu Ser Arg Asp His Asn Asn Pro Gln Glu Gly Pro Thr Ser Ser
1               5                   10                  15
Ser Gly Arg Arg Ala Ala Val Glu Asp Asn His Leu Leu Ile Lys Ala
            20                  25                  30
Val Gln Asn Glu Asp Val Asp Leu Val Gln Gln Leu Leu Glu Gly Gly
        35                  40                  45
Ala Asn Val Asn Phe Gln Glu Glu Glu Gly Gly Trp Thr Pro Leu His
    50                  55                  60
Asn Ala Val Gln Met Ser Arg Glu Asp Ile Val Glu Leu Leu Leu Arg
65                  70                  75                  80
His Gly Ala Asp Pro Val Leu Arg Lys Lys Asn Gly Ala Thr Pro Phe
                85                  90                  95
Ile Leu Ala Ala Ile Ala Gly Ser Val Lys Leu Leu Lys Leu Phe Leu
            100                 105                 110
Ser Lys Gly Ala Asp Val Asn Glu Cys Asp Phe Tyr Gly Phe Thr Ala
        115                 120                 125
Phe Met Glu Ala Ala Val Tyr Gly Lys Val Lys Ala Leu Lys Phe Leu
    130                 135                 140
Tyr Lys Arg Gly Ala Asn Val Asn Leu Arg Arg Lys Thr Lys Glu Asp
145                 150                 155                 160
Gln Glu Arg Leu Arg Lys Gly Gly Ala Thr Ala Leu Met Asp Ala Ala
                165                 170                 175
Glu Lys Gly His Val Glu Val Leu Lys Ile Leu Leu Asp Glu Met Gly
            180                 185                 190
Ala Asp Val Asn Ala Cys Asp Asn Met Gly Arg Asn Ala Leu Ile His
        195                 200                 205
Ala Leu Leu Ser Ser Asp Asp Ser Asp Val Glu Ala Ile Thr His Leu
    210                 215                 220
Leu Leu Asp His Gly Ala Asp Val Asn Val Arg Gly Glu Arg Gly Lys
225                 230                 235                 240
Thr Pro Leu Ile Leu Ala Val Glu Lys Lys His Leu Gly Leu Val Gln
                245                 250                 255
```

```
Arg Leu Leu Glu Gln Glu His Ile Glu Ile Asn Asp Thr Asp Ser Asp
            260                 265                 270
Gly Lys Thr Ala Leu Leu Leu Ala Val Glu Leu Lys Leu Lys Lys Ile
        275                 280                 285
Ala Glu Leu Leu Cys Lys Arg Gly Ala Ser Thr Asp Cys Gly Asp Leu
    290                 295                 300
Val Met Thr Ala Arg Arg Asn Tyr Asp His Ser Leu Val Lys Val Leu
305                 310                 315                 320
Leu Ser His Gly Ala Lys Glu Asp Phe His Pro Pro Ala Glu Asp Trp
                325                 330                 335
Lys Pro Gln Ser Ser His Trp Gly Ala Ala Leu Lys Asp Leu His Arg
            340                 345                 350
Ile Tyr Arg Pro Met Ile Gly Lys Leu Lys Phe Phe Ile Asp Glu Lys
        355                 360                 365
Tyr Lys Ile Ala Asp Thr Ser Glu Gly Gly Ile Tyr Leu Gly Phe Tyr
    370                 375                 380
Glu Lys Gln Glu Val Ala Val Lys Thr Phe Cys Glu Gly Ser Pro Arg
385                 390                 395                 400
Ala Gln Arg Glu Val Ser Cys Leu Gln Ser Ser Arg Glu Asn Ser His
                405                 410                 415
Leu Val Thr Phe Tyr Gly Ser Glu Ser His Arg Gly His Leu Phe Val
            420                 425                 430
Cys Val Thr Leu Cys Glu Gln Thr Leu Glu Ala Cys Leu Asp Val His
        435                 440                 445
Arg Gly Glu Asp Val Glu Asn Glu Glu Asp Glu Phe Ala Arg Asn Val
    450                 455                 460
Leu Ser Ser Ile Phe Lys Ala Val Gln Glu Leu His Leu Ser Cys Gly
465                 470                 475                 480
Tyr Thr His Gln Asp Leu Gln Pro Gln Asn Ile Leu Ile Asp Ser Lys
                485                 490                 495
Lys Ala Ala His Leu Ala Asp Phe Asp Lys Ser Ile Lys Trp Ala Gly
            500                 505                 510
Asp Pro Gln Glu Val Lys Arg Asp Leu Glu Asp Leu Gly Arg Leu Val
        515                 520                 525
Leu Tyr Val Val Lys Lys Gly Ser Ile Ser Phe Glu Asp Leu Lys Ala
    530                 535                 540
Gln Ser Asn Glu Glu Val Val Gln Leu Ser Pro Asp Glu Glu Thr Lys
545                 550                 555                 560
Asp Leu Ile His Arg Leu Phe His Pro Gly Glu His Val Arg Asp Cys
                565                 570                 575
Leu Ser Asp Leu Leu Gly His Pro Phe Phe Trp Thr Trp Glu Ser Arg
            580                 585                 590
Tyr Arg Thr Leu Arg Asn Val Gly Asn Glu Ser Asp Ile Lys Thr Arg
        595                 600                 605
Lys Ser Glu Ser Glu Ile Leu Arg Leu Leu Gln Pro Gly Pro Ser Glu
    610                 615                 620
His Ser Lys Ser Phe Asp Lys Trp Thr Thr Lys Ile Asn Glu Cys Val
625                 630                 635                 640
Met Lys Lys Met Asn Lys Phe Tyr Glu Lys Arg Gly Asn Phe Tyr Gln
                645                 650                 655
Asn Thr Val Gly Asp Leu Leu Lys Phe Ile Arg Asn Leu Gly Glu His
            660                 665                 670
Ile Asp Glu Glu Lys His Lys Lys Met Lys Leu Lys Ile Gly Asp Pro
        675                 680                 685
Ser Leu Tyr Phe Gln Lys Thr Phe Pro Asp Leu Val Ile Tyr Val Tyr
    690                 695                 700
Thr Lys Leu Gln Asn Thr Glu Tyr Arg Lys His Phe Pro Gln Thr His
705                 710                 715                 720
Ser Pro Asn Lys Pro Gln Cys Asp Gly Ala Gly Gly Ala Ser Gly Leu
                725                 730                 735
Ala Ser Pro Gly Cys
            740

<210>  308
<211>  651
<212>  PRT
<213>  Homo sapiens
<400>  308
Met Ser Gly Val Arg Ala Val Arg Ile Ser Ile Glu Ser Ala Cys Glu
```

1 5 10 15
Lys Gln Val His Glu Val Gly Leu Asp Gly Thr Glu Thr Tyr Leu Pro
20 25 30
Pro Leu Ser Met Ser Gln Asn Leu Ala Arg Leu Ala Gln Arg Ile Asp
35 40 45
Phe Ser Gln Gly Ser Gly Ser Glu Glu Glu Glu Ala Ala Gly Thr Glu
50 55 60
Gly Asp Ala Gln Glu Trp Pro Gly Ala Gly Ser Ser Ala Asp Gln Asp
65 70 75 80
Asp Glu Glu Gly Val Val Lys Phe Gln Pro Ser Leu Trp Pro Trp Asp
85 90 95
Ser Val Arg Asn Asn Leu Arg Ser Ala Leu Thr Glu Met Cys Val Leu
100 105 110
Tyr Asp Val Leu Ser Ile Val Arg Asp Lys Lys Phe Met Thr Leu Asp
115 120 125
Pro Val Ser Gln Asp Ala Leu Pro Pro Lys Gln Asn Pro Gln Thr Leu
130 135 140
Gln Leu Ile Ser Lys Lys Lys Ser Leu Ala Gly Ala Ala Gln Ile Leu
145 150 155 160
Leu Lys Gly Ala Glu Arg Leu Thr Lys Ser Val Thr Glu Asn Gln Glu
165 170 175
Asn Lys Leu Gln Arg Asp Phe Asn Ser Glu Leu Leu Arg Leu Arg Gln
180 185 190
His Trp Lys Leu Arg Lys Val Gly Asp Lys Ile Leu Gly Asp Leu Ser
195 200 205
Tyr Arg Ser Ala Gly Ser Leu Phe Pro His His Gly Thr Phe Glu Val
210 215 220
Ile Lys Asn Thr Asp Leu Asp Leu Asp Lys Lys Ile Pro Glu Asp Tyr
225 230 235 240
Cys Pro Leu Asp Val Gln Ile Pro Ser Asp Leu Glu Gly Ser Ala Tyr
245 250 255
Ile Lys Val Ser Ile Gln Lys Gln Ala Pro Asp Ile Gly Asp Leu Gly
260 265 270
Thr Val Asn Leu Phe Lys Arg Pro Leu Pro Lys Ser Lys Pro Gly Ser
275 280 285
Pro His Trp Gln Thr Lys Leu Glu Ala Ala Gln Asn Val Leu Leu Cys
290 295 300
Lys Glu Ile Phe Ala Gln Leu Ser Arg Glu Ala Val Gln Ile Lys Ser
305 310 315 320
Gln Val Pro His Ile Val Val Lys Asn Gln Ile Ile Ser Gln Pro Phe
325 330 335
Pro Ser Leu Gln Leu Ser Ile Ser Leu Cys His Ser Ser Asn Asp Lys
340 345 350
Lys Ser Gln Lys Phe Ala Thr Glu Lys Gln Cys Pro Glu Asp His Leu
355 360 365
Tyr Val Leu Glu His Asn Leu His Leu Leu Ile Arg Glu Phe His Lys
370 375 380
Gln Thr Leu Ser Ser Ile Met Met Pro His Pro Ala Ser Ala Pro Phe
385 390 395 400
Gly His Lys Arg Met Arg Leu Ser Gly Pro Gln Ala Phe Asp Lys Asn
405 410 415
Glu Ile Asn Ser Leu Gln Ser Ser Glu Gly Leu Leu Glu Lys Ile Ile
420 425 430
Lys Gln Ala Lys His Ile Phe Leu Arg Ser Arg Ala Ala Ala Thr Ile
435 440 445
Asp Ser Leu Ala Ser Arg Ile Glu Asp Pro Gln Ile Gln Ala His Trp
450 455 460
Ser Asn Ile Asn Asp Val Tyr Glu Ser Ser Val Lys Val Leu Ile Thr
465 470 475 480
Ser Gln Gly Tyr Glu Gln Ile Cys Lys Ser Ile Gln Leu Gln Leu Asn
485 490 495
Ile Gly Val Glu Gln Ile Arg Val Val His Arg Asp Gly Arg Val Ile
500 505 510
Thr Leu Ser Tyr Gln Glu Gln Glu Leu Gln Asp Phe Leu Leu Ser Gln
515 520 525
Met Ser Gln His Gln Val His Ala Val Gln Gln Leu Ala Lys Val Met
530 535 540
Gly Trp Gln Val Leu Ser Phe Ser Asn His Val Gly Leu Gly Pro Ile
545 550 555 560

Glu Ser Ile Gly Asn Ala Ser Ala Ile Thr Val Ala Ser Pro Ser Gly
565 570 575
Asp Tyr Ala Ile Ser Val Arg Asn Gly Pro Glu Ser Gly Ser Lys Ile
580 585 590
Met Val Gln Phe Pro Arg Asn Gln Cys Lys Asp Leu Pro Lys Ser Asp
595 600 605
Val Leu Gln Asp Asn Lys Trp Ser His Leu Arg Gly Pro Phe Lys Glu
610 615 620
Val Gln Trp Asn Lys Met Glu Gly Arg Asn Phe Val Tyr Lys Met Glu
625 630 635 640
Leu Leu Met Ser Ala Leu Ser Pro Cys Leu Leu
645 650

<210> 309
<211> 1496
<212> PRT
<213> Homo sapiens
<400> 309
Met Met Ala Asn Trp Ala Glu Ala Arg Pro Leu Leu Ile Leu Ile Val
1 5 10 15
Leu Leu Gly Gln Phe Val Ser Ile Lys Ala Gln Glu Glu Asp Glu Asp
20 25 30
Glu Gly Tyr Gly Glu Glu Ile Ala Cys Thr Gln Asn Gly Gln Met Tyr
35 40 45
Leu Asn Arg Asp Ile Trp Lys Pro Ala Pro Cys Gln Ile Cys Val Cys
50 55 60
Asp Asn Gly Ala Ile Leu Cys Asp Lys Ile Glu Cys Gln Asp Val Leu
65 70 75 80
Asp Cys Ala Asp Pro Val Thr Pro Pro Gly Glu Cys Cys Pro Val Cys
85 90 95
Ser Gln Thr Pro Gly Gly Gly Asn Thr Asn Phe Gly Arg Gly Arg Lys
100 105 110
Gly Gln Lys Gly Glu Pro Gly Leu Val Pro Val Val Thr Gly Ile Arg
115 120 125
Gly Arg Pro Gly Pro Ala Gly Pro Pro Gly Ser Gln Gly Pro Arg Gly
130 135 140
Glu Arg Gly Pro Lys Gly Arg Pro Gly Pro Arg Gly Pro Gln Gly Ile
145 150 155 160
Asp Gly Glu Pro Gly Val Pro Gly Gln Pro Gly Ala Pro Gly Pro Pro
165 170 175
Gly His Pro Ser His Pro Gly Pro Asp Gly Leu Ser Arg Pro Phe Ser
180 185 190
Ala Gln Met Ala Gly Leu Asp Glu Lys Ser Gly Leu Gly Ser Gln Val
195 200 205
Gly Leu Met Pro Gly Ser Val Gly Pro Val Gly Pro Arg Gly Pro Gln
210 215 220
Gly Leu Gln Gly Gln Gln Gly Gly Ala Gly Pro Thr Gly Pro Pro Gly
225 230 235 240
Glu Pro Gly Asp Pro Gly Pro Met Gly Pro Ile Gly Ser Arg Gly Pro
245 250 255
Glu Gly Pro Pro Gly Lys Pro Gly Glu Asp Gly Glu Pro Gly Arg Asn
260 265 270
Gly Asn Pro Gly Glu Val Gly Phe Ala Gly Ser Pro Gly Ala Arg Gly
275 280 285
Phe Pro Gly Ala Pro Gly Leu Pro Gly Leu Lys Gly His Arg Gly His
290 295 300
Lys Gly Leu Glu Gly Pro Lys Gly Glu Val Gly Ala Pro Gly Ser Lys
305 310 315 320
Gly Glu Ala Gly Pro Thr Gly Pro Met Gly Ala Met Gly Pro Leu Gly
325 330 335
Pro Arg Gly Met Pro Gly Glu Arg Gly Arg Leu Gly Pro Gln Gly Ala
340 345 350
Pro Gly Gln Arg Gly Ala His Gly Met Pro Gly Lys Pro Gly Pro Met
355 360 365
Gly Pro Leu Gly Ile Pro Gly Ser Ser Gly Phe Pro Gly Asn Pro Gly
370 375 380
Met Lys Gly Glu Ala Gly Pro Thr Gly Ala Arg Gly Pro Glu Gly Pro
385 390 395 400
Gln Gly Gln Arg Gly Glu Thr Gly Pro Pro Gly Pro Val Gly Ser Pro

405 410 415
Gly Leu Pro Gly Ala Ile Gly Thr Asp Gly Thr Pro Gly Pro Lys Gly
420 425 430
Pro Thr Gly Ser Pro Gly Thr Ser Gly Pro Pro Gly Ser Ala Gly Pro
435 440 445
Pro Gly Ser Pro Gly Pro Gln Gly Ser Thr Gly Pro Gln Gly Asn Ser
450 455 460
Gly Leu Pro Gly Asp Pro Gly Phe Lys Gly Glu Ala Gly Pro Lys Gly
465 470 475 480
Glu Pro Gly Pro His Gly Ile Gln Gly Pro Ile Gly Pro Pro Gly Glu
485 490 495
Glu Gly Lys Arg Gly Pro Arg Gly Asp Pro Gly Thr Leu Gly Pro Pro
500 505 510
Gly Pro Val Gly Glu Arg Gly Ala Pro Gly Asn Arg Gly Phe Pro Gly
515 520 525
Ser Asp Gly Leu Pro Gly Pro Lys Gly Ala Gln Gly Glu Arg Gly Pro
530 535 540
Val Gly Ser Ser Gly Pro Lys Gly Ser Gln Gly Asp Pro Gly Arg Pro
545 550 555 560
Gly Glu Pro Gly Leu Pro Gly Ala Arg Gly Leu Thr Gly Asn Pro Gly
565 570 575
Val Gln Gly Pro Glu Gly Lys Leu Gly Pro Leu Gly Ala Pro Gly Glu
580 585 590
Asp Gly Arg Pro Gly Pro Pro Gly Ser Ile Gly Ile Lys Gly Gln Pro
595 600 605
Gly Thr Met Gly Leu Pro Gly Pro Lys Gly Ser Asn Gly Asp Pro Gly
610 615 620
Lys Pro Gly Glu Ala Gly Asn Pro Gly Val Pro Gly Gln Arg Gly Ala
625 630 635 640
Pro Gly Lys Asp Gly Lys Val Gly Pro Tyr Gly Pro Pro Gly Pro Pro
645 650 655
Gly Leu Arg Gly Glu Arg Gly Glu Gln Gly Pro Pro Gly Pro Thr Gly
660 665 670
Phe Gln Gly His Pro Gly Pro Pro Gly Pro Pro Gly Glu Gly Gly Lys
675 680 685
Pro Gly Asp Gln Gly Val Pro Gly Gly Pro Gly Ala Val Gly Pro Leu
690 695 700
Gly Pro Arg Gly Glu Arg Gly Asn Pro Gly Glu Arg Gly Glu Pro Gly
705 710 715 720
Ile Thr Gly Leu Pro Gly Glu Lys Gly Met Ala Gly Gly His Gly Pro
725 730 735
Asp Gly Pro Lys Gly Ser Pro Gly Pro Ser Gly Thr Pro Gly Asp Thr
740 745 750
Gly Pro Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Ile Ala Gly
755 760 765
Thr Pro Gly Pro Lys Gly Asp Arg Gly Gly Ile Gly Glu Lys Gly Ala
770 775 780
Glu Gly Thr Ala Gly Asn Asp Gly Ala Gly Gly Leu Pro Gly Pro Leu
785 790 795 800
Gly Pro Pro Gly Pro Ala Gly Leu Leu Gly Glu Lys Gly Glu Pro Gly
805 810 815
Pro Arg Gly Leu Val Gly Pro Pro Gly Ser Arg Gly Asn Pro Gly Ser
820 825 830
Arg Gly Glu Asn Gly Pro Thr Gly Ala Val Gly Phe Ala Gly Pro Gln
835 840 845
Gly Ser Asp Gly Gln Pro Gly Val Lys Gly Glu Pro Gly Glu Pro Gly
850 855 860
Gln Lys Gly Asp Ala Gly Ser Pro Gly Pro Gln Gly Leu Ala Gly Ser
865 870 875 880
Pro Gly Pro His Gly Pro Asn Gly Val Pro Gly Leu Lys Gly Gly Arg
885 890 895
Gly Thr Gln Gly Pro Pro Gly Ala Thr Gly Phe Pro Gly Ser Ala Gly
900 905 910
Arg Val Gly Pro Pro Gly Pro Ala Gly Ala Pro Gly Pro Ala Gly Pro
915 920 925
Leu Gly Glu Pro Gly Lys Glu Gly Pro Pro Gly Pro Arg Gly Asp Pro
930 935 940
Gly Ser His Gly Arg Val Gly Val Arg Gly Pro Ala Gly Pro Pro Gly
945 950 955 960

Gly Pro Gly Asp Lys Gly Asp Pro Gly Glu Asp Gly Gln Pro Gly Pro
965 970 975
Asp Gly Pro Pro Gly Pro Ala Gly Thr Thr Gly Gln Arg Gly Ile Val
980 985 990
Gly Met Pro Gly Gln Arg Gly Glu Arg Gly Met Pro Gly Leu Pro Gly
995 1000 1005
Pro Ala Gly Thr Pro Gly Lys Val Gly Pro Thr Gly Ala Thr Gly
1010 1015 1020
Asp Lys Gly Pro Pro Gly Pro Val Gly Pro Pro Gly Ser Asn Gly
1025 1030 1035
Pro Val Gly Glu Pro Gly Pro Glu Gly Pro Ala Gly Asn Asp Gly
1040 1045 1050
Thr Pro Gly Arg Asp Gly Ala Val Gly Glu Arg Gly Asp Arg Gly
1055 1060 1065
Asp Pro Gly Pro Ala Gly Leu Pro Gly Ser Gln Gly Ala Pro Gly
1070 1075 1080
Thr Pro Gly Pro Val Gly Ala Pro Gly Asp Ala Gly Gln Arg Gly
1085 1090 1095
Asp Pro Gly Ser Arg Gly Pro Ile Gly His Leu Gly Arg Ala Gly
1100 1105 1110
Lys Arg Gly Leu Pro Gly Pro Gln Gly Pro Arg Gly Asp Lys Gly
1115 1120 1125
Asp His Gly Asp Arg Gly Asp Arg Gly Gln Lys Gly His Arg Gly
1130 1135 1140
Phe Thr Gly Leu Gln Gly Leu Pro Gly Pro Pro Gly Pro Asn Gly
1145 1150 1155
Glu Gln Gly Ser Ala Gly Ile Pro Gly Pro Phe Gly Pro Arg Gly
1160 1165 1170
Pro Pro Gly Pro Val Gly Pro Ser Gly Lys Glu Gly Asn Pro Gly
1175 1180 1185
Pro Leu Gly Pro Leu Gly Pro Pro Gly Val Arg Gly Ser Val Gly
1190 1195 1200
Glu Ala Gly Pro Glu Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly
1205 1210 1215
Pro Pro Gly Pro Pro Gly His Leu Thr Ala Ala Leu Gly Asp Ile
1220 1225 1230
Met Gly His Tyr Asp Glu Ser Met Pro Asp Pro Leu Pro Glu Phe
1235 1240 1245
Thr Glu Asp Gln Ala Ala Pro Asp Asp Lys Asn Lys Thr Asp Pro
1250 1255 1260
Gly Val His Ala Thr Leu Lys Ser Leu Ser Ser Gln Ile Glu Thr
1265 1270 1275
Met Arg Ser Pro Asp Gly Ser Lys Lys His Pro Ala Arg Thr Cys
1280 1285 1290
Asp Asp Leu Lys Leu Cys His Ser Ala Lys Gln Ser Gly Glu Tyr
1295 1300 1305
Trp Ile Asp Pro Asn Gln Gly Ser Val Glu Asp Ala Ile Lys Val
1310 1315 1320
Tyr Cys Asn Met Glu Thr Gly Glu Thr Cys Ile Ser Ala Asn Pro
1325 1330 1335
Ser Ser Val Pro Arg Lys Thr Trp Trp Ala Ser Lys Ser Pro Asp
1340 1345 1350
Asn Lys Pro Val Trp Tyr Gly Leu Asp Met Asn Arg Gly Ser Gln
1355 1360 1365
Phe Ala Tyr Gly Asp His Gln Ser Pro Asn Thr Ala Ile Thr Gln
1370 1375 1380
Met Thr Phe Leu Arg Leu Leu Ser Lys Glu Ala Ser Gln Asn Ile
1385 1390 1395
Thr Tyr Ile Cys Lys Asn Ser Val Gly Tyr Met Asp Asp Gln Ala
1400 1405 1410
Lys Asn Leu Lys Lys Ala Val Val Leu Lys Gly Ala Asn Asp Leu
1415 1420 1425
Asp Ile Lys Ala Glu Gly Asn Ile Arg Phe Arg Tyr Ile Val Leu
1430 1435 1440
Gln Asp Thr Cys Ser Lys Arg Asn Gly Asn Val Gly Lys Thr Val
1445 1450 1455
Phe Glu Tyr Arg Thr Gln Asn Val Ala Arg Leu Pro Ile Ile Asp
1460 1465 1470
Leu Ala Pro Val Asp Val Gly Gly Thr Asp Gln Glu Phe Gly Val

1475 1480 1485
Glu Ile Gly Pro Val Cys Phe Val
1490 1495

<210> 310
<211> 52
<212> PRT
<213> Homo sapiens
<400> 310
Met Lys Arg Lys Thr Lys Thr Pro Ser Glu Gly Gly Gln Val Leu Ala
1 5 10 15
Glu Gln Arg Gly Ser Arg Ser Cys Gln Arg Leu Thr Ala Arg Lys Ala
20 25 30
Leu Pro Ile Leu Val Phe Thr Ile Glu Thr Ala Thr Ala Cys Thr Asp
35 40 45
His Phe Gly Ser
50

<210> 311
<211> 330
<212> PRT
<213> Homo sapiens
<400> 311
Met Ala Glu Glu Asp Leu Ala Pro Gly Lys Ser Ser Val Ala Val Asn
1 5 10 15
Asn Cys Ile Arg Gln Leu Ser Tyr Cys Lys Asn Asp Ile Arg Asp Thr
20 25 30
Val Gly Ile Trp Gly Glu Gly Lys Asp Met Tyr Leu Ile Leu Glu Asn
35 40 45
Asp Met Leu Ser Leu Val Asp Pro Met Asp Arg Ser Val Leu His Ser
50 55 60
Gln Pro Ile Val Ser Ile Arg Val Trp Gly Val Gly Arg Asp Asn Gly
65 70 75 80
Arg Asp Phe Ala Tyr Val Ala Arg Asp Lys Asp Thr Arg Ile Leu Lys
85 90 95
Cys His Val Phe Arg Cys Asp Thr Pro Ala Lys Ala Ile Ala Thr Ser
100 105 110
Leu His Glu Ile Cys Ser Lys Ile Met Ala Glu Arg Lys Asn Ala Lys
115 120 125
Ala Leu Ala Cys Ser Ser Leu Gln Glu Arg Ala Asn Val Asn Leu Asp
130 135 140
Val Pro Leu Gln Val Asp Phe Pro Thr Pro Lys Thr Glu Leu Val Gln
145 150 155 160
Lys Phe His Val Gln Tyr Leu Gly Met Leu Pro Val Asp Lys Pro Val
165 170 175
Gly Met Asp Ile Leu Asn Ser Ala Ile Glu Asn Leu Met Thr Ser Ser
180 185 190
Asn Lys Glu Asp Trp Leu Ser Val Asn Met Asn Val Ala Asp Ala Thr
195 200 205
Val Thr Val Ile Ser Glu Lys Asn Glu Glu Glu Val Leu Val Glu Cys
210 215 220
Arg Val Arg Phe Leu Ser Phe Met Gly Val Gly Lys Asp Val His Thr
225 230 235 240
Phe Ala Phe Ile Met Asp Thr Gly Asn Gln Arg Phe Glu Cys His Val
245 250 255
Phe Trp Cys Glu Pro Asn Ala Gly Asn Val Ser Glu Ala Val Gln Ala
260 265 270
Ala Cys Met Leu Arg Tyr Gln Lys Cys Leu Val Ala Arg Pro Pro Ser
275 280 285
Gln Lys Val Arg Pro Pro Pro Pro Pro Ala Asp Ser Val Thr Arg Arg
290 295 300
Val Thr Thr Asn Val Lys Arg Gly Val Leu Ser Leu Ile Asp Thr Leu
305 310 315 320
Lys Gln Lys Arg Pro Val Thr Glu Met Pro
325 330

<210> 312
<211> 115
<212> PRT

<213> Homo sapiens
<400> 312

```
Met Ser Arg His Ser Arg Leu Gln Arg Gln Val Leu Ser Leu Tyr Arg
1               5                  10                  15
Asp Leu Leu Arg Ala Gly Arg Gly Lys Pro Gly Ala Glu Ala Arg Val
            20                  25                  30
Arg Ala Glu Phe Arg Gln His Ala Gly Leu Pro Arg Ser Asp Val Leu
        35                  40                  45
Arg Ile Glu Tyr Leu Tyr Arg Arg Gly Arg Arg Gln Leu Gln Leu Leu
    50                  55                  60
Arg Ser Gly His Ala Thr Ala Met Gly Ala Phe Val Arg Pro Arg Ala
65                  70                  75                  80
Pro Thr Gly Glu Pro Gly Gly Val Gly Cys Gln Pro Asp Asp Gly Asp
                85                  90                  95
Ser Pro Arg Asn Pro His Asp Ser Thr Gly Ala Pro Glu Thr Arg Pro
            100                 105                 110
Asp Gly Arg
        115
```

<210> 313
<211> 321
<212> PRT
<213> Homo sapiens
<400> 313

```
Met Lys Glu Asp Cys Leu Pro Ser Ser His Val Pro Ile Ser Asp Ser
1               5                  10                  15
Lys Ser Ile Gln Lys Ser Glu Leu Leu Gly Leu Leu Lys Thr Tyr Asn
            20                  25                  30
Cys Tyr His Glu Gly Lys Ser Phe Gln Leu Arg His Arg Glu Glu Glu
        35                  40                  45
Gly Thr Leu Ile Ile Glu Gly Leu Leu Asn Ile Ala Trp Gly Leu Arg
    50                  55                  60
Arg Pro Ile Arg Leu Gln Met Gln Asp Asp Arg Glu Gln Val His Leu
65                  70                  75                  80
Pro Ser Thr Ser Trp Met Pro Arg Arg Pro Ser Cys Pro Leu Lys Glu
                85                  90                  95
Pro Ser Pro Gln Asn Gly Asn Ile Thr Ala Gln Gly Pro Ser Ile Gln
            100                 105                 110
Pro Val His Lys Ala Glu Ser Ser Thr Asp Ser Ser Gly Pro Leu Glu
        115                 120                 125
Glu Ala Glu Glu Ala Pro Gln Leu Met Arg Thr Lys Ser Asp Ala Ser
    130                 135                 140
Cys Met Ser Gln Arg Arg Pro Lys Cys Arg Ala Pro Gly Glu Ala Gln
145                 150                 155                 160
Arg Ile Arg Arg His Arg Phe Ser Ile Asn Gly His Phe Tyr Asn His
                165                 170                 175
Lys Thr Ser Val Phe Thr Pro Ala Tyr Gly Ser Val Thr Asn Val Arg
            180                 185                 190
Val Asn Ser Thr Met Thr Thr Leu Gln Val Leu Thr Leu Leu Leu Asn
        195                 200                 205
Lys Phe Arg Val Glu Asp Gly Pro Ser Glu Phe Ala Leu Tyr Ile Val
    210                 215                 220
His Glu Ser Gly Glu Arg Thr Lys Leu Lys Asp Cys Glu Tyr Pro Leu
225                 230                 235                 240
Ile Ser Arg Ile Leu His Gly Pro Cys Glu Lys Ile Ala Arg Ile Phe
                245                 250                 255
Leu Met Glu Ala Asp Leu Gly Val Glu Val Pro His Glu Val Ala Gln
            260                 265                 270
Tyr Ile Lys Phe Glu Met Pro Val Leu Asp Ser Phe Val Glu Lys Leu
        275                 280                 285
Lys Glu Glu Glu Glu Arg Glu Ile Ile Lys Leu Thr Met Lys Phe Gln
    290                 295                 300
Ala Leu Arg Leu Thr Met Leu Gln Arg Leu Glu Gln Leu Val Glu Ala
305                 310                 315                 320
Lys
```

<210> 314
<211> 490

<212> PRT
<213> Homo sapiens
<400> 314

```
Met Trp Pro Gln Asp Pro Ser Arg Lys Glu Val Leu Arg Phe Ala Val
1               5                  10                  15
Ser Cys Arg Ile Leu Thr Leu Met Leu Gln Ala Leu Phe Asn Ala Ile
            20                  25                  30
Ile Pro Asp His His Ala Glu Ala Phe Ser Pro Pro Arg Leu Ala Pro
        35                  40                  45
Ser Gly Phe Val Asp Gln Leu Val Glu Gly Leu Leu Gly Gly Leu Ser
    50                  55                  60
His Trp Asp Ala Glu His Phe Leu Phe Ile Ala Glu His Gly Tyr Leu
65                  70                  75                  80
Tyr Glu His Asn Phe Ala Phe Phe Pro Gly Phe Pro Leu Ala Leu Leu
                85                  90                  95
Val Gly Thr Glu Leu Leu Arg Pro Leu Arg Gly Leu Leu Ser Leu Arg
            100                 105                 110
Ser Cys Leu Leu Ile Ser Val Ala Ser Leu Asn Phe Leu Phe Phe Met
        115                 120                 125
Leu Ala Ala Val Ala Leu His Asp Leu Gly Cys Leu Val Leu His Cys
    130                 135                 140
Pro His Gln Ser Phe Tyr Ala Ala Leu Leu Phe Cys Leu Ser Pro Ala
145                 150                 155                 160
Asn Val Phe Leu Ala Ala Gly Tyr Ser Glu Ala Leu Phe Ala Leu Leu
                165                 170                 175
Thr Phe Ser Ala Met Gly Gln Leu Glu Arg Gly Arg Val Trp Thr Ser
            180                 185                 190
Val Leu Leu Phe Ala Phe Ala Thr Gly Val Arg Ser Asn Gly Leu Val
        195                 200                 205
Ser Val Gly Phe Leu Met His Ser Gln Cys Gln Gly Phe Phe Ser Ser
    210                 215                 220
Leu Thr Met Leu Asn Pro Leu Arg Gln Leu Phe Lys Leu Met Ala Ser
225                 230                 235                 240
Leu Phe Leu Ser Val Phe Thr Leu Gly Leu Pro Phe Ala Leu Phe Gln
                245                 250                 255
Tyr Tyr Ala Tyr Thr Gln Phe Cys Leu Pro Gly Ser Ala Arg Pro Ile
            260                 265                 270
Pro Glu Pro Leu Val Gln Leu Ala Val Asp Lys Gly Tyr Arg Ile Ala
        275                 280                 285
Glu Gly Asn Glu Pro Pro Trp Cys Phe Trp Asp Val Pro Leu Ile Tyr
    290                 295                 300
Ser Tyr Ile Gln Asp Val Tyr Trp Asn Val Gly Phe Leu Lys Tyr Tyr
305                 310                 315                 320
Glu Leu Lys Gln Val Pro Asn Phe Leu Leu Ala Ala Pro Val Ala Ile
                325                 330                 335
Leu Val Ala Trp Ala Thr Trp Thr Tyr Val Thr Thr His Pro Trp Leu
            340                 345                 350
Cys Leu Thr Leu Gly Leu Gln Arg Ser Lys Asn Asn Lys Thr Leu Glu
        355                 360                 365
Lys Pro Asp Leu Gly Phe Leu Ser Pro Gln Val Phe Val Tyr Val Val
    370                 375                 380
His Ala Ala Val Leu Leu Leu Phe Gly Gly Leu Cys Met His Val Gln
385                 390                 395                 400
Val Leu Thr Arg Phe Leu Gly Ser Ser Thr Pro Ile Met Tyr Trp Phe
                405                 410                 415
Pro Ala His Leu Leu Gln Asp Gln Glu Pro Leu Leu Arg Ser Leu Lys
            420                 425                 430
Thr Val Pro Trp Lys Pro Leu Ala Glu Asp Ser Pro Pro Gly Gln Lys
        435                 440                 445
Val Pro Arg Asn Pro Ile Met Gly Leu Leu Tyr His Trp Lys Thr Cys
    450                 455                 460
Ser Pro Val Thr Arg Tyr Ile Leu Gly Tyr Phe Leu Thr Tyr Trp Leu
465                 470                 475                 480
Leu Gly Leu Leu Leu His Cys Asn Phe Leu
                485                 490
```

<210> 315
<211> 688
<212> PRT

<213> Homo sapiens
<400> 315

Met Ser Ser Arg Thr Val Leu Ala Pro Gly Asn Asp Arg Asn Ser Asp
1 5 10 15
Thr His Gly Thr Leu Gly Ser Gly Arg Ser Ser Asp Lys Gly Pro Ser
20 25 30
Trp Ser Ser Arg Ser Leu Gly Ala Arg Cys Arg Asn Ser Ile Ala Ser
35 40 45
Cys Pro Glu Glu Gln Pro His Val Gly Asn Tyr Arg Leu Leu Arg Thr
50 55 60
Ile Gly Lys Gly Asn Phe Ala Lys Val Lys Leu Ala Arg His Ile Leu
65 70 75 80
Thr Gly Arg Glu Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asn
85 90 95
Pro Ser Ser Leu Gln Lys Leu Phe Arg Glu Val Arg Ile Met Lys Gly
100 105 110
Leu Asn His Pro Asn Ile Val Lys Leu Phe Glu Val Ile Glu Thr Glu
115 120 125
Lys Thr Leu Tyr Leu Val Met Glu Tyr Ala Ser Ala Gly Glu Val Phe
130 135 140
Asp Tyr Leu Val Ser His Gly Arg Met Lys Glu Lys Glu Ala Arg Ala
145 150 155 160
Lys Phe Arg Gln Ile Val Ser Ala Val His Tyr Cys His Gln Lys Asn
165 170 175
Ile Val His Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Glu
180 185 190
Ala Asn Ile Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe Thr Leu
195 200 205
Gly Ser Lys Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala Ala Pro
210 215 220
Glu Leu Phe Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp Ile Trp
225 230 235 240
Ser Leu Gly Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu Pro Phe
245 250 255
Asp Gly His Asn Leu Lys Glu Leu Arg Glu Arg Val Leu Arg Gly Lys
260 265 270
Tyr Arg Val Pro Phe Tyr Met Ser Thr Asp Cys Glu Ser Ile Leu Arg
275 280 285
Arg Phe Leu Val Leu Asn Pro Ala Lys Arg Cys Thr Leu Glu Gln Ile
290 295 300
Met Lys Asp Lys Trp Ile Asn Ile Gly Tyr Glu Gly Glu Glu Leu Lys
305 310 315 320
Pro Tyr Thr Glu Pro Glu Glu Asp Phe Gly Asp Thr Lys Arg Ile Glu
325 330 335
Val Met Val Gly Met Gly Tyr Thr Arg Glu Glu Ile Lys Glu Ser Leu
340 345 350
Thr Ser Gln Lys Tyr Asn Glu Val Thr Ala Thr Tyr Leu Leu Leu Gly
355 360 365
Arg Lys Thr Glu Glu Gly Gly Asp Arg Gly Ala Pro Gly Leu Ala Leu
370 375 380
Ala Arg Val Arg Ala Pro Ser Asp Thr Thr Asn Gly Thr Ser Ser Ser
385 390 395 400
Lys Gly Thr Ser His Ser Lys Gly Gln Arg Ser Ser Ser Ser Thr Tyr
405 410 415
His Arg Gln Arg Arg His Ser Asp Phe Cys Gly Pro Ser Pro Ala Pro
420 425 430
Leu His Pro Lys Arg Ser Pro Thr Ser Thr Gly Glu Ala Glu Leu Lys
435 440 445
Glu Glu Arg Leu Pro Gly Arg Lys Ala Ser Cys Ser Thr Ala Gly Ser
450 455 460
Gly Ser Arg Gly Leu Pro Pro Ser Ser Pro Met Val Ser Ser Ala His
465 470 475 480
Asn Pro Asn Lys Ala Glu Ile Pro Glu Arg Arg Lys Asp Ser Thr Ser
485 490 495
Thr Pro Asn Asn Leu Pro Pro Ser Met Met Thr Arg Arg Asn Thr Tyr
500 505 510
Val Cys Thr Glu Arg Pro Gly Ala Glu Arg Pro Ser Leu Leu Pro Asn
515 520 525
Gly Lys Glu Asn Ser Ser Gly Thr Pro Arg Val Pro Pro Ala Ser Pro

530 535 540
Ser Ser His Ser Leu Ala Pro Pro Ser Gly Glu Arg Ser Arg Leu Ala
545 550 555 560
Arg Gly Ser Thr Ile Arg Ser Thr Phe His Gly Gly Gln Val Arg Asp
565 570 575
Arg Arg Ala Gly Gly Gly Gly Gly Gly Gly Val Gln Asn Gly Pro Pro
580 585 590
Ala Ser Pro Thr Leu Ala His Glu Ala Ala Pro Leu Pro Ala Gly Arg
595 600 605
Pro Arg Pro Thr Thr Asn Leu Phe Thr Lys Leu Thr Ser Lys Leu Thr
610 615 620
Arg Arg Val Thr Leu Asp Pro Ser Lys Arg Gln Asn Ser Asn Arg Cys
625 630 635 640
Val Ser Gly Ala Ser Leu Pro Gln Gly Ser Lys Ile Arg Ser Gln Thr
645 650 655
Asn Leu Arg Glu Ser Gly Asp Leu Arg Ser Gln Val Ala Ile Tyr Leu
660 665 670
Gly Ile Lys Arg Lys Pro Pro Pro Gly Cys Ser Asp Ser Pro Gly Val
675 680 685

<210> 316
<211> 338
<212> PRT
<213> Homo sapiens
<400> 316
Met Ser Leu Ser Ala Phe Thr Leu Phe Leu Ala Leu Ile Gly Gly Thr
1 5 10 15
Ser Gly Gln Tyr Tyr Asp Tyr Asp Phe Pro Leu Ser Ile Tyr Gly Gln
20 25 30
Ser Ser Pro Asn Cys Ala Pro Glu Cys Asn Cys Pro Glu Ser Tyr Pro
35 40 45
Ser Ala Met Tyr Cys Asp Glu Leu Lys Leu Lys Ser Val Pro Met Val
50 55 60
Pro Pro Gly Ile Lys Tyr Leu Tyr Leu Arg Asn Asn Gln Ile Asp His
65 70 75 80
Ile Asp Glu Lys Ala Phe Glu Asn Val Thr Asp Leu Gln Trp Leu Ile
85 90 95
Leu Asp His Asn Leu Leu Glu Asn Ser Lys Ile Lys Gly Arg Val Phe
100 105 110
Ser Lys Leu Lys Gln Leu Lys Lys Leu His Ile Asn His Asn Asn Leu
115 120 125
Thr Glu Ser Val Gly Pro Leu Pro Lys Ser Leu Glu Asp Leu Gln Leu
130 135 140
Thr His Asn Lys Ile Thr Lys Leu Gly Ser Phe Glu Gly Leu Val Asn
145 150 155 160
Leu Thr Phe Ile His Leu Gln His Asn Arg Leu Lys Glu Asp Ala Val
165 170 175
Ser Ala Ala Phe Lys Gly Leu Lys Ser Leu Glu Tyr Leu Asp Leu Ser
180 185 190
Phe Asn Gln Ile Ala Arg Leu Pro Ser Gly Leu Pro Val Ser Leu Leu
195 200 205
Thr Leu Tyr Leu Asp Asn Asn Lys Ile Ser Asn Ile Pro Asp Glu Tyr
210 215 220
Phe Lys Arg Phe Asn Ala Leu Gln Tyr Leu Arg Leu Ser His Asn Glu
225 230 235 240
Leu Ala Asp Ser Gly Ile Pro Gly Asn Ser Phe Asn Val Ser Ser Leu
245 250 255
Val Glu Leu Asp Leu Ser Tyr Asn Lys Leu Lys Asn Ile Pro Thr Val
260 265 270
Asn Glu Asn Leu Glu Asn Tyr Tyr Leu Glu Val Asn Gln Leu Glu Lys
275 280 285
Phe Asp Ile Lys Ser Phe Cys Lys Ile Leu Gly Pro Leu Ser Tyr Ser
290 295 300
Lys Ile Lys His Leu Arg Leu Asp Gly Asn Arg Ile Ser Glu Thr Ser
305 310 315 320
Leu Pro Pro Asp Met Tyr Glu Cys Leu Arg Val Ala Asn Glu Val Thr
325 330 335
Leu Asn

<210> 317
<211> 1466
<212> PRT
<213> Homo sapiens
<400> 317

Met Met Ser Phe Val Gln Lys Gly Ser Trp Leu Leu Leu Ala Leu Leu
1 5 10 15
His Pro Thr Ile Ile Leu Ala Gln Gln Glu Ala Val Glu Gly Gly Cys
20 25 30
Ser His Leu Gly Gln Ser Tyr Ala Asp Arg Asp Val Trp Lys Pro Glu
35 40 45
Pro Cys Gln Ile Cys Val Cys Asp Ser Gly Ser Val Leu Cys Asp Asp
50 55 60
Ile Ile Cys Asp Asp Gln Glu Leu Asp Cys Pro Asn Pro Glu Ile Pro
65 70 75 80
Phe Gly Glu Cys Cys Ala Val Cys Pro Gln Pro Pro Thr Ala Pro Thr
85 90 95
Arg Pro Pro Asn Gly Gln Gly Pro Gln Gly Pro Lys Gly Asp Pro Gly
100 105 110
Pro Pro Gly Ile Pro Gly Arg Asn Gly Asp Pro Gly Ile Pro Gly Gln
115 120 125
Pro Gly Ser Pro Gly Ser Pro Gly Pro Pro Gly Ile Cys Glu Ser Cys
130 135 140
Pro Thr Gly Pro Gln Asn Tyr Ser Pro Gln Tyr Asp Ser Tyr Asp Val
145 150 155 160
Lys Ser Gly Val Ala Val Gly Gly Leu Ala Gly Tyr Pro Gly Pro Ala
165 170 175
Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Thr Ser Gly His Pro Gly
180 185 190
Ser Pro Gly Ser Pro Gly Tyr Gln Gly Pro Pro Gly Glu Pro Gly Gln
195 200 205
Ala Gly Pro Ser Gly Pro Pro Gly Pro Pro Gly Ala Ile Gly Pro Ser
210 215 220
Gly Pro Ala Gly Lys Asp Gly Glu Ser Gly Arg Pro Gly Arg Pro Gly
225 230 235 240
Glu Arg Gly Leu Pro Gly Pro Pro Gly Ile Lys Gly Pro Ala Gly Ile
245 250 255
Pro Gly Phe Pro Gly Met Lys Gly His Arg Gly Phe Asp Gly Arg Asn
260 265 270
Gly Glu Lys Gly Glu Thr Gly Ala Pro Gly Leu Lys Gly Glu Asn Gly
275 280 285
Leu Pro Gly Glu Asn Gly Ala Pro Gly Pro Met Gly Pro Arg Gly Ala
290 295 300
Pro Gly Glu Arg Gly Arg Pro Gly Leu Pro Gly Ala Ala Gly Ala Arg
305 310 315 320
Gly Asn Asp Gly Ala Arg Gly Ser Asp Gly Gln Pro Gly Pro Pro Gly
325 330 335
Pro Pro Gly Thr Ala Gly Phe Pro Gly Ser Pro Gly Ala Lys Gly Glu
340 345 350
Val Gly Pro Ala Gly Ser Pro Gly Ser Asn Gly Ala Pro Gly Gln Arg
355 360 365
Gly Glu Pro Gly Pro Gln Gly His Ala Gly Ala Gln Gly Pro Pro Gly
370 375 380
Pro Pro Gly Ile Asn Gly Ser Pro Gly Gly Lys Gly Glu Met Gly Pro
385 390 395 400
Ala Gly Ile Pro Gly Ala Pro Gly Leu Met Gly Ala Arg Gly Pro Pro
405 410 415
Gly Pro Ala Gly Ala Asn Gly Ala Pro Gly Leu Arg Gly Gly Ala Gly
420 425 430
Glu Pro Gly Lys Asn Gly Ala Lys Gly Glu Pro Gly Pro Arg Gly Glu
435 440 445
Arg Gly Glu Ala Gly Ile Pro Gly Val Pro Gly Ala Lys Gly Glu Asp
450 455 460
Gly Lys Asp Gly Ser Pro Gly Glu Pro Gly Ala Asn Gly Leu Pro Gly
465 470 475 480
Ala Ala Gly Glu Arg Gly Ala Pro Gly Phe Arg Gly Pro Ala Gly Pro
485 490 495
Asn Gly Ile Pro Gly Glu Lys Gly Pro Ala Gly Glu Arg Gly Ala Pro

```
                500                 505                 510
Gly Pro Ala Gly Pro Arg Gly Ala Ala Gly Glu Pro Gly Arg Asp Gly
            515                 520                 525
Val Pro Gly Gly Pro Gly Met Arg Gly Met Pro Gly Ser Pro Gly Gly
        530                 535                 540
Pro Gly Ser Asp Gly Lys Pro Gly Pro Pro Gly Ser Gln Gly Glu Ser
545                 550                 555                 560
Gly Arg Pro Gly Pro Pro Gly Pro Ser Gly Pro Arg Gly Gln Pro Gly
                565                 570                 575
Val Met Gly Phe Pro Gly Pro Lys Gly Asn Asp Gly Ala Pro Gly Lys
            580                 585                 590
Asn Gly Glu Arg Gly Gly Pro Gly Gly Pro Gly Pro Gln Gly Pro Pro
        595                 600                 605
Gly Lys Asn Gly Glu Thr Gly Pro Gln Gly Pro Pro Gly Pro Thr Gly
    610                 615                 620
Pro Gly Gly Asp Lys Gly Asp Thr Gly Pro Pro Gly Pro Gln Gly Leu
625                 630                 635                 640
Gln Gly Leu Pro Gly Thr Gly Gly Pro Pro Gly Glu Asn Gly Lys Pro
                645                 650                 655
Gly Glu Pro Gly Pro Lys Gly Asp Ala Gly Ala Pro Gly Ala Pro Gly
            660                 665                 670
Gly Lys Gly Asp Ala Gly Ala Pro Gly Glu Arg Gly Pro Pro Gly Leu
        675                 680                 685
Ala Gly Ala Pro Gly Leu Arg Gly Gly Ala Gly Pro Pro Gly Pro Glu
    690                 695                 700
Gly Gly Lys Gly Ala Ala Gly Pro Pro Gly Pro Pro Gly Ala Ala Gly
705                 710                 715                 720
Thr Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Gly Leu Gly Ser
                725                 730                 735
Pro Gly Pro Lys Gly Asp Lys Gly Glu Pro Gly Gly Pro Gly Ala Asp
            740                 745                 750
Gly Val Pro Gly Lys Asp Gly Pro Arg Gly Pro Thr Gly Pro Ile Gly
        755                 760                 765
Pro Pro Gly Pro Ala Gly Gln Pro Gly Asp Lys Gly Glu Gly Gly Ala
    770                 775                 780
Pro Gly Leu Pro Gly Ile Ala Gly Pro Arg Gly Ser Pro Gly Glu Arg
785                 790                 795                 800
Gly Glu Thr Gly Pro Pro Gly Pro Ala Gly Phe Pro Gly Ala Pro Gly
                805                 810                 815
Gln Asn Gly Glu Pro Gly Gly Lys Gly Glu Arg Gly Ala Pro Gly Glu
            820                 825                 830
Lys Gly Glu Gly Gly Pro Pro Gly Val Ala Gly Pro Pro Gly Gly Ser
        835                 840                 845
Gly Pro Ala Gly Pro Pro Gly Pro Gln Gly Val Lys Gly Glu Arg Gly
    850                 855                 860
Ser Pro Gly Gly Pro Gly Ala Ala Gly Phe Pro Gly Ala Arg Gly Leu
865                 870                 875                 880
Pro Gly Pro Pro Gly Ser Asn Gly Asn Pro Gly Pro Pro Gly Pro Ser
                885                 890                 895
Gly Ser Pro Gly Lys Asp Gly Pro Pro Gly Pro Ala Gly Asn Thr Gly
            900                 905                 910
Ala Pro Gly Ser Pro Gly Val Ser Gly Pro Lys Gly Asp Ala Gly Gln
        915                 920                 925
Pro Gly Glu Lys Gly Ser Pro Gly Ala Gln Gly Pro Pro Gly Ala Pro
    930                 935                 940
Gly Pro Leu Gly Ile Ala Gly Ile Thr Gly Ala Arg Gly Leu Ala Gly
945                 950                 955                 960
Pro Pro Gly Met Pro Gly Pro Arg Gly Ser Pro Gly Pro Gln Gly Val
                965                 970                 975
Lys Gly Glu Ser Gly Lys Pro Gly Ala Asn Gly Leu Ser Gly Glu Arg
            980                 985                 990
Gly Pro Pro Gly Pro Gln Gly Leu  Pro Gly Leu Ala Gly  Thr Ala Gly
        995                1000                1005
Glu Pro  Gly Arg Asp Gly Asn  Pro Gly Ser Asp Gly  Leu Pro Gly
    1010                1015                1020
Arg Asp  Gly Ser Pro Gly Gly  Lys Gly Asp Arg Gly  Glu Asn Gly
    1025                1030                1035
Ser Pro  Gly Ala Pro Gly Ala  Pro Gly His Pro Gly  Pro Pro Gly
    1040                1045                1050
```

```
Pro Val  Gly Pro Ala Gly Lys  Ser Gly Asp Arg Gly  Glu Ser Gly
    1055                1060                1065
Pro Ala  Gly Pro Ala Gly Ala  Pro Gly Pro Ala Gly  Ser Arg Gly
    1070                1075                1080
Ala Pro  Gly Pro Gln Gly Pro  Arg Gly Asp Lys Gly  Glu Thr Gly
    1085                1090                1095
Glu Arg  Gly Ala Ala Gly Ile  Lys Gly His Arg Gly  Phe Pro Gly
    1100                1105                1110
Asn Pro  Gly Ala Pro Gly Ser  Pro Gly Pro Ala Gly  Gln Gln Gly
    1115                1120                1125
Ala Ile  Gly Ser Pro Gly Pro  Ala Gly Pro Arg Gly  Pro Val Gly
    1130                1135                1140
Pro Ser  Gly Pro Pro Gly Lys  Asp Gly Thr Ser Gly  His Pro Gly
    1145                1150                1155
Pro Ile  Gly Pro Pro Gly Pro  Arg Gly Asn Arg Gly  Glu Arg Gly
    1160                1165                1170
Ser Glu  Gly Ser Pro Gly His  Pro Gly Gln Pro Gly  Pro Pro Gly
    1175                1180                1185
Pro Pro  Gly Ala Pro Gly Pro  Cys Cys Gly Gly Val  Gly Ala Ala
    1190                1195                1200
Ala Ile  Ala Gly Ile Gly Gly  Glu Lys Ala Gly Gly  Phe Ala Pro
    1205                1210                1215
Tyr Tyr  Gly Asp Glu Pro Met  Asp Phe Lys Ile Asn  Thr Asp Glu
    1220                1225                1230
Ile Met  Thr Ser Leu Lys Ser  Val Asn Gly Gln Ile  Glu Ser Leu
    1235                1240                1245
Ile Ser  Pro Asp Gly Ser Arg  Lys Asn Pro Ala Arg  Asn Cys Arg
    1250                1255                1260
Asp Leu  Lys Phe Cys His Pro  Glu Leu Lys Ser Gly  Glu Tyr Trp
    1265                1270                1275
Val Asp  Pro Asn Gln Gly Cys  Lys Leu Asp Ala Ile  Lys Val Phe
    1280                1285                1290
Cys Asn  Met Glu Thr Gly Glu  Thr Cys Ile Ser Ala  Asn Pro Leu
    1295                1300                1305
Asn Val  Pro Arg Lys His Trp  Trp Thr Asp Ser Ser  Ala Glu Lys
    1310                1315                1320
Lys His  Val Trp Phe Gly Glu  Ser Met Asp Gly Gly  Phe Gln Phe
    1325                1330                1335
Ser Tyr  Gly Asn Pro Glu Leu  Pro Glu Asp Val Leu  Asp Val Gln
    1340                1345                1350
Leu Ala  Phe Leu Arg Leu Leu  Ser Ser Arg Ala Ser  Gln Asn Ile
    1355                1360                1365
Thr Tyr  His Cys Lys Asn Ser  Ile Ala Tyr Met Asp  Gln Ala Ser
    1370                1375                1380
Gly Asn  Val Lys Lys Ala Leu  Lys Leu Met Gly Ser  Asn Glu Gly
    1385                1390                1395
Glu Phe  Lys Ala Glu Gly Asn  Ser Lys Phe Thr Tyr  Thr Val Leu
    1400                1405                1410
Glu Asp  Gly Cys Thr Lys His  Thr Gly Glu Trp Ser  Lys Thr Val
    1415                1420                1425
Phe Glu  Tyr Arg Thr Arg Lys  Ala Val Arg Leu Pro  Ile Val Asp
    1430                1435                1440
Ile Ala  Pro Tyr Asp Ile Gly  Gly Pro Asp Gln Glu  Phe Gly Val
    1445                1450                1455
Asp Val  Gly Pro Val Cys Phe  Leu
    1460                1465
```

<210> 318
<211> 1464
<212> PRT
<213> Homo sapiens
<400> 318

```
Met Phe Ser Phe Val Asp Leu Arg Leu Leu Leu Leu Leu Ala Ala Thr
1               5                  10                  15
Ala Leu Leu Thr His Gly Gln Glu Glu Gly Gln Val Glu Gly Gln Asp
            20                  25                  30
Glu Asp Ile Pro Pro Ile Thr Cys Val Gln Asn Gly Leu Arg Tyr His
        35                  40                  45
Asp Arg Asp Val Trp Lys Pro Glu Pro Cys Arg Ile Cys Val Cys Asp
```

```
    50                  55                  60
Asn Gly Lys Val Leu Cys Asp Asp Val Ile Cys Asp Glu Thr Lys Asn
65                  70                  75                  80
Cys Pro Gly Ala Glu Val Pro Glu Gly Glu Cys Cys Pro Val Cys Pro
                85                  90                  95
Asp Gly Ser Glu Ser Pro Thr Asp Gln Glu Thr Thr Gly Val Glu Gly
            100                 105                 110
Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Arg Gly Pro Ala Gly Pro
        115                 120                 125
Pro Gly Arg Asp Gly Ile Pro Gly Gln Pro Gly Leu Pro Gly Pro Pro
    130                 135                 140
Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala
145                 150                 155                 160
Pro Gln Leu Ser Tyr Gly Tyr Asp Glu Lys Ser Thr Gly Gly Ile Ser
                165                 170                 175
Val Pro Gly Pro Met Gly Pro Ser Gly Pro Arg Gly Leu Pro Gly Pro
            180                 185                 190
Pro Gly Ala Pro Gly Pro Gln Gly Phe Gln Gly Pro Pro Gly Glu Pro
        195                 200                 205
Gly Glu Pro Gly Ala Ser Gly Pro Met Gly Pro Arg Gly Pro Pro Gly
    210                 215                 220
Pro Pro Gly Lys Asn Gly Asp Asp Gly Glu Ala Gly Lys Pro Gly Arg
225                 230                 235                 240
Pro Gly Glu Arg Gly Pro Pro Gly Pro Gln Gly Ala Arg Gly Leu Pro
                245                 250                 255
Gly Thr Ala Gly Leu Pro Gly Met Lys Gly His Arg Gly Phe Ser Gly
            260                 265                 270
Leu Asp Gly Ala Lys Gly Asp Ala Gly Pro Ala Gly Pro Lys Gly Glu
        275                 280                 285
Pro Gly Ser Pro Gly Glu Asn Gly Ala Pro Gly Gln Met Gly Pro Arg
    290                 295                 300
Gly Leu Pro Gly Glu Arg Gly Arg Pro Gly Ala Pro Gly Pro Ala Gly
305                 310                 315                 320
Ala Arg Gly Asn Asp Gly Ala Thr Gly Ala Ala Gly Pro Pro Gly Pro
                325                 330                 335
Thr Gly Pro Ala Gly Pro Pro Gly Phe Pro Gly Ala Val Gly Ala Lys
            340                 345                 350
Gly Glu Ala Gly Pro Gln Gly Pro Arg Gly Ser Glu Gly Pro Gln Gly
        355                 360                 365
Val Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Ala Ala Gly Pro
    370                 375                 380
Ala Gly Asn Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Ala Asn
385                 390                 395                 400
Gly Ala Pro Gly Ile Ala Gly Ala Pro Gly Phe Pro Gly Ala Arg Gly
                405                 410                 415
Pro Ser Gly Pro Gln Gly Pro Gly Gly Pro Pro Gly Pro Lys Gly Asn
            420                 425                 430
Ser Gly Glu Pro Gly Ala Pro Gly Ser Lys Gly Asp Thr Gly Ala Lys
        435                 440                 445
Gly Glu Pro Gly Pro Val Gly Val Gln Gly Pro Pro Gly Pro Ala Gly
    450                 455                 460
Glu Glu Gly Lys Arg Gly Ala Arg Gly Glu Pro Gly Pro Thr Gly Leu
465                 470                 475                 480
Pro Gly Pro Pro Gly Glu Arg Gly Gly Pro Gly Ser Arg Gly Phe Pro
                485                 490                 495
Gly Ala Asp Gly Val Ala Gly Pro Lys Gly Pro Ala Gly Glu Arg Gly
            500                 505                 510
Ser Pro Gly Pro Ala Gly Pro Lys Gly Ser Pro Gly Glu Ala Gly Arg
        515                 520                 525
Pro Gly Glu Ala Gly Leu Pro Gly Ala Lys Gly Leu Thr Gly Ser Pro
    530                 535                 540
Gly Ser Pro Gly Pro Asp Gly Lys Thr Gly Pro Pro Gly Pro Ala Gly
545                 550                 555                 560
Gln Asp Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Ala Arg Gly Gln
                565                 570                 575
Ala Gly Val Met Gly Phe Pro Gly Pro Lys Gly Ala Ala Gly Glu Pro
            580                 585                 590
Gly Lys Ala Gly Glu Arg Gly Val Pro Gly Pro Pro Gly Ala Val Gly
        595                 600                 605
```

Pro Ala Gly Lys Asp Gly Glu Ala Gly Ala Gln Gly Pro Pro Gly Pro
610 615 620
Ala Gly Pro Ala Gly Glu Arg Gly Glu Gln Gly Pro Ala Gly Ser Pro
625 630 635 640
Gly Phe Gln Gly Leu Pro Gly Pro Ala Gly Pro Pro Gly Glu Ala Gly
645 650 655
Lys Pro Gly Glu Gln Gly Val Pro Gly Asp Leu Gly Ala Pro Gly Pro
660 665 670
Ser Gly Ala Arg Gly Glu Arg Gly Phe Pro Gly Glu Arg Gly Val Gln
675 680 685
Gly Pro Pro Gly Pro Ala Gly Pro Arg Gly Ala Asn Gly Ala Pro Gly
690 695 700
Asn Asp Gly Ala Lys Gly Asp Ala Gly Ala Pro Gly Ala Pro Gly Ser
705 710 715 720
Gln Gly Ala Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Ala Ala
725 730 735
Gly Leu Pro Gly Pro Lys Gly Asp Arg Gly Asp Ala Gly Pro Lys Gly
740 745 750
Ala Asp Gly Ser Pro Gly Lys Asp Gly Val Arg Gly Leu Thr Gly Pro
755 760 765
Ile Gly Pro Pro Gly Pro Ala Gly Ala Pro Gly Asp Lys Gly Glu Ser
770 775 780
Gly Pro Ser Gly Pro Ala Gly Pro Thr Gly Ala Arg Gly Ala Pro Gly
785 790 795 800
Asp Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Phe Ala Gly Pro
805 810 815
Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Glu Pro Gly Asp Ala
820 825 830
Gly Ala Lys Gly Asp Ala Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly
835 840 845
Pro Pro Gly Pro Ile Gly Asn Val Gly Ala Pro Gly Ala Lys Gly Ala
850 855 860
Arg Gly Ser Ala Gly Pro Pro Gly Ala Thr Gly Phe Pro Gly Ala Ala
865 870 875 880
Gly Arg Val Gly Pro Pro Gly Pro Ser Gly Asn Ala Gly Pro Pro Gly
885 890 895
Pro Pro Gly Pro Ala Gly Lys Glu Gly Gly Lys Gly Pro Arg Gly Glu
900 905 910
Thr Gly Pro Ala Gly Arg Pro Gly Glu Val Gly Pro Pro Gly Pro Pro
915 920 925
Gly Pro Ala Gly Glu Lys Gly Ser Pro Gly Ala Asp Gly Pro Ala Gly
930 935 940
Ala Pro Gly Thr Pro Gly Pro Gln Gly Ile Ala Gly Gln Arg Gly Val
945 950 955 960
Val Gly Leu Pro Gly Gln Arg Gly Glu Arg Gly Phe Pro Gly Leu Pro
965 970 975
Gly Pro Ser Gly Glu Pro Gly Lys Gln Gly Pro Ser Gly Ala Ser Gly
980 985 990
Glu Arg Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Ala Gly Pro
995 1000 1005
Pro Gly Glu Ser Gly Arg Glu Gly Ala Pro Ala Ala Glu Gly Ser
1010 1015 1020
Pro Gly Arg Asp Gly Ser Pro Gly Ala Lys Gly Asp Arg Gly Glu
1025 1030 1035
Thr Gly Pro Ala Gly Pro Pro Gly Ala Pro Gly Ala Pro Gly Ala
1040 1045 1050
Pro Gly Pro Val Gly Pro Ala Gly Lys Ser Gly Asp Arg Gly Glu
1055 1060 1065
Thr Gly Pro Ala Gly Pro Ala Gly Pro Val Gly Pro Val Gly Ala
1070 1075 1080
Arg Gly Pro Ala Gly Pro Gln Gly Pro Arg Gly Asp Lys Gly Glu
1085 1090 1095
Thr Gly Glu Gln Gly Asp Arg Gly Ile Lys Gly His Arg Gly Phe
1100 1105 1110
Ser Gly Leu Gln Gly Pro Pro Gly Pro Pro Gly Ser Pro Gly Glu
1115 1120 1125
Gln Gly Pro Ser Gly Ala Ser Gly Pro Ala Gly Pro Arg Gly Pro
1130 1135 1140
Pro Gly Ser Ala Gly Ala Pro Gly Lys Asp Gly Leu Asn Gly Leu

```
    1145                1150                1155
Pro Gly Pro Ile Gly Pro Pro Gly Pro Arg Gly Arg Thr Gly Asp
    1160                1165                1170
Ala Gly Pro Val Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro
    1175                1180                1185
Pro Gly Pro Pro Ser Ala Gly Phe Asp Phe Ser Phe Leu Pro Gln
    1190                1195                1200
Pro Pro Gln Glu Lys Ala His Asp Gly Gly Arg Tyr Tyr Arg Ala
    1205                1210                1215
Asp Asp Ala Asn Val Val Arg Asp Arg Asp Leu Glu Val Asp Thr
    1220                1225                1230
Thr Leu Lys Ser Leu Ser Gln Gln Ile Glu Asn Ile Arg Ser Pro
    1235                1240                1245
Glu Gly Ser Arg Lys Asn Pro Ala Arg Thr Cys Arg Asp Leu Lys
    1250                1255                1260
Met Cys His Ser Asp Trp Lys Ser Gly Glu Tyr Trp Ile Asp Pro
    1265                1270                1275
Asn Gln Gly Cys Asn Leu Asp Ala Ile Lys Val Phe Cys Asn Met
    1280                1285                1290
Glu Thr Gly Glu Thr Cys Val Tyr Pro Thr Gln Pro Ser Val Ala
    1295                1300                1305
Gln Lys Asn Trp Tyr Ile Ser Lys Asn Pro Lys Asp Lys Arg His
    1310                1315                1320
Val Trp Phe Gly Glu Ser Met Thr Asp Gly Phe Gln Phe Glu Tyr
    1325                1330                1335
Gly Gly Gln Gly Ser Asp Pro Ala Asp Val Ala Ile Gln Leu Thr
    1340                1345                1350
Phe Leu Arg Leu Met Ser Thr Glu Ala Ser Gln Asn Ile Thr Tyr
    1355                1360                1365
His Cys Lys Asn Ser Val Ala Tyr Met Asp Gln Gln Thr Gly Asn
    1370                1375                1380
Leu Lys Lys Ala Leu Leu Leu Lys Gly Ser Asn Glu Ile Glu Ile
    1385                1390                1395
Arg Ala Glu Gly Asn Ser Arg Phe Thr Tyr Ser Val Thr Val Asp
    1400                1405                1410
Gly Cys Thr Ser His Thr Gly Ala Trp Gly Lys Thr Val Ile Glu
    1415                1420                1425
Tyr Lys Thr Thr Lys Ser Ser Arg Leu Pro Ile Ile Asp Val Ala
    1430                1435                1440
Pro Leu Asp Val Gly Ala Pro Asp Gln Glu Phe Gly Phe Asp Val
    1445                1450                1455
Gly Pro Val Cys Phe Leu
    1460
```

<210> 319
<211> 764
<212> PRT
<213> Homo sapiens
<400> 319

```
Met Gly Ser Asn Leu Ser Pro Gln Leu Cys Leu Met Pro Phe Ile Leu
1               5                  10                  15
Gly Leu Leu Ser Gly Gly Val Thr Thr Thr Pro Trp Ser Leu Ala Gln
            20                  25                  30
Pro Gln Gly Ser Cys Ser Leu Glu Gly Val Glu Ile Lys Gly Gly Ser
        35                  40                  45
Phe Arg Leu Leu Gln Glu Gly Gln Ala Leu Glu Tyr Val Cys Pro Ser
    50                  55                  60
Gly Phe Tyr Pro Tyr Pro Val Gln Thr Arg Thr Cys Arg Ser Thr Gly
65                  70                  75                  80
Ser Trp Ser Thr Leu Lys Thr Gln Asp Gln Lys Thr Val Arg Lys Ala
                85                  90                  95
Glu Cys Arg Ala Ile His Cys Pro Arg Pro His Asp Phe Glu Asn Gly
            100                 105                 110
Glu Tyr Trp Pro Arg Ser Pro Tyr Tyr Asn Val Ser Asp Glu Ile Ser
        115                 120                 125
Phe His Cys Tyr Asp Gly Tyr Thr Leu Arg Gly Ser Ala Asn Arg Thr
    130                 135                 140
Cys Gln Val Asn Gly Arg Trp Ser Gly Gln Thr Ala Ile Cys Asp Asn
145                 150                 155                 160
```

```
Gly Ala Gly Tyr Cys Ser Asn Pro Gly Ile Pro Ile Gly Thr Arg Lys
                165                 170                 175
Val Gly Ser Gln Tyr Arg Leu Glu Asp Ser Val Thr Tyr His Cys Ser
            180                 185                 190
Arg Gly Leu Thr Leu Arg Gly Ser Gln Arg Arg Thr Cys Gln Glu Gly
        195                 200                 205
Gly Ser Trp Ser Gly Thr Glu Pro Ser Cys Gln Asp Ser Phe Met Tyr
    210                 215                 220
Asp Thr Pro Gln Glu Val Ala Glu Ala Phe Leu Ser Ser Leu Thr Glu
225                 230                 235                 240
Thr Ile Glu Gly Val Asp Ala Glu Asp Gly His Gly Pro Gly Glu Gln
                245                 250                 255
Gln Lys Arg Lys Ile Val Leu Asp Pro Ser Gly Ser Met Asn Ile Tyr
            260                 265                 270
Leu Val Leu Asp Gly Ser Asp Ser Ile Gly Ala Ser Asn Phe Thr Gly
        275                 280                 285
Ala Lys Lys Cys Leu Val Asn Leu Ile Glu Lys Val Ala Ser Tyr Gly
    290                 295                 300
Val Lys Pro Arg Tyr Gly Leu Val Thr Tyr Ala Thr Tyr Pro Lys Ile
305                 310                 315                 320
Trp Val Lys Val Ser Glu Ala Asp Ser Ser Asn Ala Asp Trp Val Thr
                325                 330                 335
Lys Gln Leu Asn Glu Ile Asn Tyr Glu Asp His Lys Leu Lys Ser Gly
            340                 345                 350
Thr Asn Thr Lys Lys Ala Leu Gln Ala Val Tyr Ser Met Met Ser Trp
        355                 360                 365
Pro Asp Asp Val Pro Pro Glu Gly Trp Asn Arg Thr Arg His Val Ile
    370                 375                 380
Ile Leu Met Thr Asp Gly Leu His Asn Met Gly Gly Asp Pro Ile Thr
385                 390                 395                 400
Val Ile Asp Glu Ile Arg Asp Leu Leu Tyr Ile Gly Lys Asp Arg Lys
                405                 410                 415
Asn Pro Arg Glu Asp Tyr Leu Asp Val Tyr Val Phe Gly Val Gly Pro
            420                 425                 430
Leu Val Asn Gln Val Asn Ile Asn Ala Leu Ala Ser Lys Lys Asp Asn
        435                 440                 445
Glu Gln His Val Phe Lys Val Lys Asp Met Glu Asn Leu Glu Asp Val
    450                 455                 460
Phe Tyr Gln Met Ile Asp Glu Ser Gln Ser Leu Ser Leu Cys Gly Met
465                 470                 475                 480
Val Trp Glu His Arg Lys Gly Thr Asp Tyr His Lys Gln Pro Trp Gln
                485                 490                 495
Ala Lys Ile Ser Val Ile Arg Pro Ser Lys Gly His Glu Ser Cys Met
            500                 505                 510
Gly Ala Val Val Ser Glu Tyr Phe Val Leu Thr Ala Ala His Cys Phe
        515                 520                 525
Thr Val Asp Asp Lys Glu His Ser Ile Lys Val Ser Val Gly Gly Glu
    530                 535                 540
Lys Arg Asp Leu Glu Ile Glu Val Val Leu Phe His Pro Asn Tyr Asn
545                 550                 555                 560
Ile Asn Gly Lys Lys Glu Ala Gly Ile Pro Glu Phe Tyr Asp Tyr Asp
                565                 570                 575
Val Ala Leu Ile Lys Leu Lys Asn Lys Leu Lys Tyr Gly Gln Thr Ile
            580                 585                 590
Arg Pro Ile Cys Leu Pro Cys Thr Glu Gly Thr Thr Arg Ala Leu Arg
        595                 600                 605
Leu Pro Pro Thr Thr Thr Cys Gln Gln Gln Lys Glu Glu Leu Leu Pro
    610                 615                 620
Ala Gln Asp Ile Lys Ala Leu Phe Val Ser Glu Glu Glu Lys Lys Leu
625                 630                 635                 640
Thr Arg Lys Glu Val Tyr Ile Lys Asn Gly Asp Lys Lys Gly Ser Cys
                645                 650                 655
Glu Arg Asp Ala Gln Tyr Ala Pro Gly Tyr Asp Lys Val Lys Asp Ile
            660                 665                 670
Ser Glu Val Val Thr Pro Arg Phe Leu Cys Thr Gly Gly Val Ser Pro
        675                 680                 685
Tyr Ala Asp Pro Asn Thr Cys Arg Gly Asp Ser Gly Gly Pro Leu Ile
    690                 695                 700
Val His Lys Arg Ser Arg Phe Ile Gln Val Gly Val Ile Ser Trp Gly
```

705 710 715 720
Val Val Asp Val Cys Lys Asn Gln Lys Arg Gln Lys Gln Val Pro Ala
725 730 735
His Ala Arg Asp Phe His Ile Asn Leu Phe Gln Val Leu Pro Trp Leu
740 745 750
Lys Glu Lys Leu Gln Asp Glu Asp Leu Gly Phe Leu
755 760

<210> 320
<211> 909
<212> PRT
<213> Homo sapiens
<400> 320
Met Ala Ala Arg Pro Leu Pro Val Ser Pro Ala Arg Ala Leu Leu Leu
1 5 10 15
Ala Leu Ala Gly Ala Leu Leu Ala Pro Cys Glu Ala Arg Gly Val Ser
20 25 30
Leu Trp Asn Gln Gly Arg Ala Asp Glu Val Val Ser Ala Ser Val Arg
35 40 45
Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp Ser Lys Asn His
50 55 60
Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu Ser Lys Glu Leu Ile
65 70 75 80
Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile Ala Ser Ser Phe Thr Glu
85 90 95
Thr His Tyr Leu Gln Asp Gly Thr Asp Val Ser Leu Ala Arg Asn Tyr
100 105 110
Thr Val Ile Leu Gly His Cys Tyr Tyr His Gly His Val Arg Gly Tyr
115 120 125
Ser Asp Ser Ala Val Ser Leu Ser Thr Cys Ser Gly Leu Arg Gly Leu
130 135 140
Ile Val Phe Glu Asn Glu Ser Tyr Val Leu Glu Pro Met Lys Ser Ala
145 150 155 160
Thr Asn Arg Tyr Lys Leu Phe Pro Ala Lys Lys Leu Lys Ser Val Arg
165 170 175
Gly Ser Cys Gly Ser His His Asn Thr Pro Asn Leu Ala Ala Lys Asn
180 185 190
Val Phe Pro Pro Pro Ser Gln Thr Trp Ala Arg Arg His Lys Arg Glu
195 200 205
Thr Leu Lys Ala Thr Lys Tyr Val Glu Leu Val Ile Val Ala Asp Asn
210 215 220
Arg Glu Phe Gln Arg Gln Gly Lys Asp Leu Glu Lys Val Lys Gln Arg
225 230 235 240
Leu Ile Glu Ile Ala Asn His Val Asp Lys Phe Tyr Arg Pro Leu Asn
245 250 255
Ile Arg Ile Val Leu Val Gly Val Glu Val Trp Asn Asp Met Asp Lys
260 265 270
Cys Ser Val Ser Gln Asp Pro Phe Thr Ser Leu His Glu Phe Leu Asp
275 280 285
Trp Arg Lys Met Lys Leu Leu Pro Arg Lys Ser His Asp Asn Ala Gln
290 295 300
Leu Val Ser Gly Val Tyr Phe Gln Gly Thr Thr Ile Gly Met Ala Pro
305 310 315 320
Ile Met Ser Met Cys Thr Ala Asp Gln Ser Gly Gly Ile Val Met Asp
325 330 335
His Ser Asp Asn Pro Leu Gly Ala Ala Val Thr Leu Ala His Glu Leu
340 345 350
Gly His Asn Phe Gly Met Asn His Asp Thr Leu Asp Arg Gly Cys Ser
355 360 365
Cys Gln Met Ala Val Glu Lys Gly Gly Cys Ile Met Asn Ala Ser Thr
370 375 380
Gly Tyr Pro Phe Pro Met Val Phe Ser Ser Cys Ser Arg Lys Asp Leu
385 390 395 400
Glu Thr Ser Leu Glu Lys Gly Met Gly Val Cys Leu Phe Asn Leu Pro
405 410 415
Glu Val Arg Glu Ser Phe Gly Gly Gln Lys Cys Gly Asn Arg Phe Val
420 425 430
Glu Glu Gly Glu Glu Cys Asp Cys Gly Glu Pro Glu Glu Cys Met Asn
435 440 445

```
Arg Cys Cys Asn Ala Thr Thr Cys Thr Leu Lys Pro Asp Ala Val Cys
    450                 455                 460
Ala His Gly Leu Cys Cys Glu Asp Cys Gln Leu Lys Pro Ala Gly Thr
465                 470                 475                 480
Ala Cys Arg Asp Ser Ser Asn Ser Cys Asp Leu Pro Glu Phe Cys Thr
                485                 490                 495
Gly Ala Ser Pro His Cys Pro Ala Asn Val Tyr Leu His Asp Gly His
            500                 505                 510
Ser Cys Gln Asp Val Asp Gly Tyr Cys Tyr Asn Gly Ile Cys Gln Thr
        515                 520                 525
His Glu Gln Gln Cys Val Thr Leu Trp Gly Pro Gly Ala Lys Pro Ala
    530                 535                 540
Pro Gly Ile Cys Phe Glu Arg Val Asn Ser Ala Gly Asp Pro Tyr Gly
545                 550                 555                 560
Asn Cys Gly Lys Val Ser Lys Ser Ser Phe Ala Lys Cys Glu Met Arg
                565                 570                 575
Asp Ala Lys Cys Gly Lys Ile Gln Cys Gln Gly Gly Ala Ser Arg Pro
            580                 585                 590
Val Ile Gly Thr Asn Ala Val Ser Ile Glu Thr Asn Ile Pro Leu Gln
        595                 600                 605
Gln Gly Gly Arg Ile Leu Cys Arg Gly Thr His Val Tyr Leu Gly Asp
    610                 615                 620
Asp Met Pro Asp Pro Gly Leu Val Leu Ala Gly Thr Lys Cys Ala Asp
625                 630                 635                 640
Gly Lys Ile Cys Leu Asn Arg Gln Cys Gln Asn Ile Ser Val Phe Gly
                645                 650                 655
Val His Glu Cys Ala Met Gln Cys His Gly Arg Gly Val Cys Asn Asn
            660                 665                 670
Arg Lys Asn Cys His Cys Glu Ala His Trp Ala Pro Pro Phe Cys Asp
        675                 680                 685
Lys Phe Gly Phe Gly Gly Ser Thr Asp Ser Gly Pro Ile Arg Gln Ala
    690                 695                 700
Asp Asn Gln Gly Leu Thr Ile Gly Ile Leu Val Thr Ile Leu Cys Leu
705                 710                 715                 720
Leu Ala Ala Gly Phe Val Val Tyr Leu Lys Arg Lys Thr Leu Ile Arg
                725                 730                 735
Leu Leu Phe Thr Asn Lys Lys Thr Thr Ile Glu Lys Leu Arg Cys Val
            740                 745                 750
Arg Pro Ser Arg Pro Pro Arg Gly Phe Gln Pro Cys Gln Ala His Leu
        755                 760                 765
Gly His Leu Gly Lys Gly Leu Met Arg Lys Pro Pro Asp Ser Tyr Pro
    770                 775                 780
Pro Lys Asp Asn Pro Arg Arg Leu Leu Gln Cys Gln Asn Val Asp Ile
785                 790                 795                 800
Ser Arg Pro Leu Asn Gly Leu Asn Val Pro Gln Pro Gln Ser Thr Gln
                805                 810                 815
Arg Val Leu Pro Pro Leu His Arg Ala Pro Arg Ala Pro Ser Val Pro
            820                 825                 830
Ala Arg Pro Leu Pro Ala Lys Pro Ala Leu Arg Gln Ala Gln Gly Thr
        835                 840                 845
Cys Lys Pro Asn Pro Pro Gln Lys Pro Leu Pro Ala Asp Pro Leu Ala
    850                 855                 860
Arg Thr Thr Arg Leu Thr His Ala Leu Ala Arg Thr Pro Gly Gln Trp
865                 870                 875                 880
Glu Thr Gly Leu Arg Leu Ala Pro Leu Arg Pro Ala Pro Gln Tyr Pro
                885                 890                 895
His Gln Val Pro Arg Ser Thr His Thr Ala Tyr Ile Lys
            900                 905
```

<210> 321
<211> 574
<212> PRT
<213> Homo sapiens
<400> 321

```
Met Ala Leu Ala Arg Gly Ser Arg Gln Leu Gly Ala Leu Val Trp Gly
1               5                   10                  15
Ala Cys Leu Cys Val Leu Val His Gly Gln Gln Ala Gln Pro Gly Gln
            20                  25                  30
Gly Ser Asp Pro Ala Arg Trp Arg Gln Leu Ile Gln Trp Glu Asn Asn
```

```
        35                  40                  45
Gly Gln Val Tyr Ser Leu Leu Asn Ser Gly Ser Glu Tyr Val Pro Ala
    50                  55                  60
Gly Pro Gln Arg Ser Glu Ser Ser Ser Arg Val Leu Leu Ala Gly Ala
65                  70                  75                  80
Pro Gln Ala Gln Gln Arg Arg Ser His Gly Ser Pro Arg Arg Arg Gln
                85                  90                  95
Ala Pro Ser Leu Pro Leu Pro Gly Arg Val Gly Ser Asp Thr Val Arg
            100                 105                 110
Gly Gln Ala Arg His Pro Phe Gly Phe Gly Gln Val Pro Asp Asn Trp
        115                 120                 125
Arg Glu Val Ala Val Gly Asp Ser Thr Gly Met Ala Leu Ala Arg Thr
    130                 135                 140
Ser Val Ser Gln Gln Arg His Gly Gly Ser Ala Ser Ser Val Ser Ala
145                 150                 155                 160
Ser Ala Phe Ala Ser Thr Tyr Arg Gln Gln Pro Ser Tyr Pro Gln Gln
                165                 170                 175
Phe Pro Tyr Pro Gln Ala Pro Phe Val Ser Gln Tyr Glu Asn Tyr Asp
            180                 185                 190
Pro Ala Ser Arg Thr Tyr Asp Gln Gly Phe Val Tyr Tyr Arg Pro Ala
        195                 200                 205
Gly Gly Gly Val Gly Ala Gly Ala Ala Ala Val Ala Ser Ala Gly Val
    210                 215                 220
Ile Tyr Pro Tyr Gln Pro Arg Ala Arg Tyr Glu Glu Tyr Gly Gly Gly
225                 230                 235                 240
Glu Glu Leu Pro Glu Tyr Pro Pro Gln Gly Phe Tyr Pro Ala Pro Glu
                245                 250                 255
Arg Pro Tyr Val Pro Pro Pro Pro Pro Pro Pro Asp Gly Leu Asp Arg
            260                 265                 270
Arg Tyr Ser His Ser Leu Tyr Ser Glu Gly Thr Pro Gly Phe Glu Gln
        275                 280                 285
Ala Tyr Pro Asp Pro Gly Pro Glu Ala Ala Gln Ala His Gly Gly Asp
    290                 295                 300
Pro Arg Leu Gly Trp Tyr Pro Pro Tyr Ala Asn Pro Pro Pro Glu Ala
305                 310                 315                 320
Tyr Gly Pro Pro Arg Ala Leu Glu Pro Pro Tyr Leu Pro Val Arg Ser
                325                 330                 335
Ser Asp Thr Pro Pro Pro Gly Gly Glu Arg Asn Gly Ala Gln Gln Gly
            340                 345                 350
Arg Leu Ser Val Gly Ser Val Tyr Arg Pro Asn Gln Asn Gly Arg Gly
        355                 360                 365
Leu Pro Asp Leu Val Pro Asp Pro Asn Tyr Val Gln Ala Ser Thr Tyr
    370                 375                 380
Val Gln Arg Ala His Leu Tyr Ser Leu Arg Cys Ala Ala Glu Glu Lys
385                 390                 395                 400
Cys Leu Ala Ser Thr Ala Tyr Ala Pro Glu Ala Thr Asp Tyr Asp Val
                405                 410                 415
Arg Val Leu Leu Arg Phe Pro Gln Arg Val Lys Asn Gln Gly Thr Ala
            420                 425                 430
Asp Phe Leu Pro Asn Arg Pro Arg His Thr Trp Glu Trp His Ser Cys
        435                 440                 445
His Gln His Tyr His Ser Met Asp Glu Phe Ser His Tyr Asp Leu Leu
    450                 455                 460
Asp Ala Ala Thr Gly Lys Lys Val Ala Glu Gly His Lys Ala Ser Phe
465                 470                 475                 480
Cys Leu Glu Asp Ser Thr Cys Asp Phe Gly Asn Leu Lys Arg Tyr Ala
                485                 490                 495
Cys Thr Ser His Thr Gln Gly Leu Ser Pro Gly Cys Tyr Asp Thr Tyr
            500                 505                 510
Asn Ala Asp Ile Asp Cys Gln Trp Ile Asp Ile Thr Asp Val Gln Pro
        515                 520                 525
Gly Asn Tyr Ile Leu Lys Val His Val Asn Pro Lys Tyr Ile Val Leu
    530                 535                 540
Glu Ser Asp Phe Thr Asn Asn Val Val Arg Cys Asn Ile His Tyr Thr
545                 550                 555                 560
Gly Arg Tyr Val Ser Ala Thr Asn Cys Lys Ile Val Gln Ser
                565                 570
```

<210> 322

<211> 344
<212> PRT
<213> Homo sapiens
<400> 322

```
Met Gly Pro Pro Ser Ala Pro Pro Cys Arg Leu His Val Pro Trp Lys
1               5                  10                  15
Glu Val Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
            20                  25                  30
Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
        35                  40                  45
Lys Glu Val Leu Leu Leu Ala His Asn Leu Pro Gln Asn Arg Ile Gly
    50                  55                  60
Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Ser Leu Ile Val
65                  70                  75                  80
Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser
                85                  90                  95
Gly Arg Glu Thr Ile Tyr Pro Asn Ala Ser Leu Leu Ile Gln Asn Val
            100                 105                 110
Thr Gln Asn Asp Thr Gly Phe Tyr Thr Leu Gln Val Ile Lys Ser Asp
        115                 120                 125
Leu Val Asn Glu Glu Ala Thr Gly Gln Phe His Val Tyr Pro Glu Leu
    130                 135                 140
Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Asn Pro Val Glu Asp Lys
145                 150                 155                 160
Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Val Gln Asn Thr Thr Tyr
                165                 170                 175
Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser Pro Arg Leu Gln
            180                 185                 190
Leu Ser Asn Gly Asn Met Thr Leu Thr Leu Leu Ser Val Lys Arg Asn
        195                 200                 205
Asp Ala Gly Ser Tyr Glu Cys Glu Ile Gln Asn Pro Ala Ser Ala Asn
    210                 215                 220
Arg Ser Asp Pro Val Thr Leu Asn Val Leu Tyr Gly Pro Asp Val Pro
225                 230                 235                 240
Thr Ile Ser Pro Ser Lys Ala Asn Tyr Arg Pro Gly Glu Asn Leu Asn
                245                 250                 255
Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser Trp Phe
            260                 265                 270
Ile Asn Gly Thr Phe Gln Gln Ser Thr Gln Glu Leu Phe Ile Pro Asn
        275                 280                 285
Ile Thr Val Asn Asn Ser Gly Ser Tyr Met Cys Gln Ala His Asn Ser
    290                 295                 300
Ala Thr Gly Leu Asn Arg Thr Thr Val Thr Met Ile Thr Val Ser Gly
305                 310                 315                 320
Ser Ala Pro Val Leu Ser Ala Val Ala Thr Val Gly Ile Thr Ile Gly
                325                 330                 335
Val Leu Ala Arg Val Ala Leu Ile
            340
```

<210> 323
<211> 488
<212> PRT
<213> Homo sapiens
<400> 323

```
Met Ala Pro Ala Ala Trp Leu Arg Ser Ala Ala Ala Arg Ala Leu Leu
1               5                  10                  15
Pro Pro Met Leu Leu Leu Leu Leu Gln Pro Pro Pro Leu Leu Ala Arg
            20                  25                  30
Ala Leu Pro Pro Asp Val His His Leu His Ala Glu Arg Arg Gly Pro
        35                  40                  45
Gln Pro Trp His Ala Ala Leu Pro Ser Ser Pro Ala Pro Ala Pro Ala
    50                  55                  60
Thr Gln Glu Ala Pro Arg Pro Ala Ser Ser Leu Arg Pro Pro Arg Cys
65                  70                  75                  80
Gly Val Pro Asp Pro Ser Asp Gly Leu Ser Ala Arg Asn Arg Gln Lys
                85                  90                  95
Arg Phe Val Leu Ser Gly Gly Arg Trp Glu Lys Thr Asp Leu Thr Tyr
            100                 105                 110
Arg Ile Leu Arg Phe Pro Trp Gln Leu Val Gln Glu Gln Val Arg Gln
```

```
        115                 120                 125
Thr Met Ala Glu Ala Leu Lys Val Trp Ser Asp Val Thr Pro Leu Thr
    130                 135                 140
Phe Thr Glu Val His Glu Gly Arg Ala Asp Ile Met Ile Asp Phe Ala
145                 150                 155                 160
Arg Tyr Trp His Gly Asp Asp Leu Pro Phe Asp Gly Pro Gly Gly Ile
                165                 170                 175
Leu Ala His Ala Phe Phe Pro Lys Thr His Arg Glu Gly Asp Val His
            180                 185                 190
Phe Asp Tyr Asp Glu Thr Trp Thr Ile Gly Asp Asp Gln Gly Thr Asp
        195                 200                 205
Leu Leu Gln Val Ala Ala His Glu Phe Gly His Val Leu Gly Leu Gln
    210                 215                 220
His Thr Thr Ala Ala Lys Ala Leu Met Ser Ala Phe Tyr Thr Phe Arg
225                 230                 235                 240
Tyr Pro Leu Ser Leu Ser Pro Asp Asp Cys Arg Gly Val Gln His Leu
                245                 250                 255
Tyr Gly Gln Pro Trp Pro Thr Val Thr Ser Arg Thr Pro Ala Leu Gly
            260                 265                 270
Pro Gln Ala Gly Ile Asp Thr Asn Glu Ile Ala Pro Leu Glu Pro Asp
        275                 280                 285
Ala Pro Pro Asp Ala Cys Glu Ala Ser Phe Asp Ala Val Ser Thr Ile
    290                 295                 300
Arg Gly Glu Leu Phe Phe Phe Lys Ala Gly Phe Val Trp Arg Leu Arg
305                 310                 315                 320
Gly Gly Gln Leu Gln Pro Gly Tyr Pro Ala Leu Ala Ser Arg His Trp
                325                 330                 335
Gln Gly Leu Pro Ser Pro Val Asp Ala Ala Phe Glu Asp Ala Gln Gly
            340                 345                 350
His Ile Trp Phe Phe Gln Gly Ala Gln Tyr Trp Val Tyr Asp Gly Glu
        355                 360                 365
Lys Pro Val Leu Gly Pro Ala Pro Leu Thr Glu Leu Gly Leu Val Arg
    370                 375                 380
Phe Pro Val His Ala Ala Leu Val Trp Gly Pro Glu Lys Asn Lys Ile
385                 390                 395                 400
Tyr Phe Phe Arg Gly Arg Asp Tyr Trp Arg Phe His Pro Ser Thr Arg
                405                 410                 415
Arg Val Asp Ser Pro Val Pro Arg Arg Ala Thr Asp Trp Arg Gly Val
            420                 425                 430
Pro Ser Glu Ile Asp Ala Ala Phe Gln Asp Ala Asp Gly Tyr Ala Tyr
        435                 440                 445
Phe Leu Arg Gly Arg Leu Tyr Trp Lys Phe Asp Pro Val Lys Val Lys
    450                 455                 460
Ala Leu Glu Gly Phe Pro Arg Leu Val Gly Pro Asp Phe Phe Gly Cys
465                 470                 475                 480
Ala Glu Pro Ala Asn Thr Phe Leu
                485
```

<210> 324
<211> 469
<212> PRT
<213> Homo sapiens
<400> 324

```
Met His Ser Phe Pro Pro Leu Leu Leu Leu Phe Trp Gly Val Val
1               5                   10                  15
Ser His Ser Phe Pro Ala Thr Leu Glu Thr Gln Glu Gln Asp Val Asp
            20                  25                  30
Leu Val Gln Lys Tyr Leu Glu Lys Tyr Tyr Asn Leu Lys Asn Asp Gly
        35                  40                  45
Arg Gln Val Glu Lys Arg Arg Asn Ser Gly Pro Val Val Glu Lys Leu
    50                  55                  60
Lys Gln Met Gln Glu Phe Phe Gly Leu Lys Val Thr Gly Lys Pro Asp
65                  70                  75                  80
Ala Glu Thr Leu Lys Val Met Lys Gln Pro Arg Cys Gly Val Pro Asp
                85                  90                  95
Val Ala Gln Phe Val Leu Thr Glu Gly Asn Pro Arg Trp Glu Gln Thr
            100                 105                 110
His Leu Thr Tyr Arg Ile Glu Asn Tyr Thr Pro Asp Leu Pro Arg Ala
        115                 120                 125
```

```
Asp Val Asp His Ala Ile Glu Lys Ala Phe Gln Leu Trp Ser Asn Val
    130                 135                 140
Thr Pro Leu Thr Phe Thr Lys Val Ser Glu Gly Gln Ala Asp Ile Met
145                 150                 155                 160
Ile Ser Phe Val Arg Gly Asp His Arg Asp Asn Ser Pro Phe Asp Gly
                165                 170                 175
Pro Gly Gly Asn Leu Ala His Ala Phe Gln Pro Gly Pro Gly Ile Gly
            180                 185                 190
Gly Asp Ala His Phe Asp Glu Asp Glu Arg Trp Thr Asn Asn Phe Arg
        195                 200                 205
Glu Tyr Asn Leu His Arg Val Ala Ala His Glu Leu Gly His Ser Leu
    210                 215                 220
Gly Leu Ser His Ser Thr Asp Ile Gly Ala Leu Met Tyr Pro Ser Tyr
225                 230                 235                 240
Thr Phe Ser Gly Asp Val Gln Leu Ala Gln Asp Asp Ile Asp Gly Ile
                245                 250                 255
Gln Ala Ile Tyr Gly Arg Ser Gln Asn Pro Val Gln Pro Ile Gly Pro
            260                 265                 270
Gln Thr Pro Lys Ala Cys Asp Ser Lys Leu Thr Phe Asp Ala Ile Thr
        275                 280                 285
Thr Ile Arg Gly Glu Val Met Phe Phe Lys Asp Arg Phe Tyr Met Arg
    290                 295                 300
Thr Asn Pro Phe Tyr Pro Glu Val Glu Leu Asn Phe Ile Ser Val Phe
305                 310                 315                 320
Trp Pro Gln Leu Pro Asn Gly Leu Glu Ala Ala Tyr Glu Phe Ala Asp
                325                 330                 335
Arg Asp Glu Val Arg Phe Phe Lys Gly Asn Lys Tyr Trp Ala Val Gln
            340                 345                 350
Gly Gln Asn Val Leu His Gly Tyr Pro Lys Asp Ile Tyr Ser Ser Phe
        355                 360                 365
Gly Phe Pro Arg Thr Val Lys His Ile Asp Ala Ala Leu Ser Glu Glu
    370                 375                 380
Asn Thr Gly Lys Thr Tyr Phe Phe Val Ala Asn Lys Tyr Trp Arg Tyr
385                 390                 395                 400
Asp Glu Tyr Lys Arg Ser Met Asp Pro Gly Tyr Pro Lys Met Ile Ala
                405                 410                 415
His Asp Phe Pro Gly Ile Gly His Lys Val Asp Ala Val Phe Met Lys
            420                 425                 430
Asp Gly Phe Phe Tyr Phe Phe His Gly Thr Arg Gln Tyr Lys Phe Asp
        435                 440                 445
Pro Lys Thr Lys Arg Ile Leu Thr Leu Gln Lys Ala Asn Ser Trp Phe
    450                 455                 460
Asn Cys Arg Lys Asn
465
```

<210> 325
<211> 471
<212> PRT
<213> Homo sapiens
<400> 325

```
Met His Pro Gly Val Leu Ala Ala Phe Leu Phe Leu Ser Trp Thr His
1               5                   10                  15
Cys Arg Ala Leu Pro Leu Pro Ser Gly Gly Asp Glu Asp Asp Leu Ser
            20                  25                  30
Glu Glu Asp Leu Gln Phe Ala Glu Arg Tyr Leu Arg Ser Tyr Tyr His
        35                  40                  45
Pro Thr Asn Leu Ala Gly Ile Leu Lys Glu Asn Ala Ala Ser Ser Met
    50                  55                  60
Thr Glu Arg Leu Arg Glu Met Gln Ser Phe Phe Gly Leu Glu Val Thr
65                  70                  75                  80
Gly Lys Leu Asp Asp Asn Thr Leu Asp Val Met Lys Lys Pro Arg Cys
                85                  90                  95
Gly Val Pro Asp Val Gly Glu Tyr Asn Val Phe Pro Arg Thr Leu Lys
            100                 105                 110
Trp Ser Lys Met Asn Leu Thr Tyr Arg Ile Val Asn Tyr Thr Pro Asp
        115                 120                 125
Met Thr His Ser Glu Val Glu Lys Ala Phe Lys Lys Ala Phe Lys Val
    130                 135                 140
Trp Ser Asp Val Thr Pro Leu Asn Phe Thr Arg Leu His Asp Gly Ile
```

```
145                 150                 155                 160
Ala Asp Ile Met Ile Ser Phe Gly Ile Lys Glu His Gly Asp Phe Tyr
                165                 170                 175
Pro Phe Asp Gly Pro Ser Gly Leu Leu Ala His Ala Phe Pro Pro Gly
            180                 185                 190
Pro Asn Tyr Gly Gly Asp Ala His Phe Asp Asp Asp Glu Thr Trp Thr
        195                 200                 205
Ser Ser Ser Lys Gly Tyr Asn Leu Phe Leu Val Ala Ala His Glu Phe
    210                 215                 220
Gly His Ser Leu Gly Leu Asp His Ser Lys Asp Pro Gly Ala Leu Met
225                 230                 235                 240
Phe Pro Ile Tyr Thr Tyr Thr Gly Lys Ser His Phe Met Leu Pro Asp
                245                 250                 255
Asp Asp Val Gln Gly Ile Gln Ser Leu Tyr Gly Pro Gly Asp Glu Asp
            260                 265                 270
Pro Asn Pro Lys His Pro Lys Thr Pro Asp Lys Cys Asp Pro Ser Leu
        275                 280                 285
Ser Leu Asp Ala Ile Thr Ser Leu Arg Gly Glu Thr Met Ile Phe Lys
    290                 295                 300
Asp Arg Phe Phe Trp Arg Leu His Pro Gln Gln Val Asp Ala Glu Leu
305                 310                 315                 320
Phe Leu Thr Lys Ser Phe Trp Pro Glu Leu Pro Asn Arg Ile Asp Ala
                325                 330                 335
Ala Tyr Glu His Pro Ser His Asp Leu Ile Phe Ile Phe Arg Gly Arg
            340                 345                 350
Lys Phe Trp Ala Leu Asn Gly Tyr Asp Ile Leu Glu Gly Tyr Pro Lys
        355                 360                 365
Lys Ile Ser Glu Leu Gly Leu Pro Lys Glu Val Lys Lys Ile Ser Ala
    370                 375                 380
Ala Val His Phe Glu Asp Thr Gly Lys Thr Leu Leu Phe Ser Gly Asn
385                 390                 395                 400
Gln Val Trp Arg Tyr Asp Asp Thr Asn His Ile Met Asp Lys Asp Tyr
                405                 410                 415
Pro Arg Leu Ile Glu Glu Asp Phe Pro Gly Ile Gly Asp Lys Val Asp
            420                 425                 430
Ala Val Tyr Glu Lys Asn Gly Tyr Ile Tyr Phe Phe Asn Gly Pro Ile
        435                 440                 445
Gln Phe Glu Tyr Ser Ile Trp Ser Asn Arg Ile Val Arg Val Met Pro
    450                 455                 460
Ala Asn Ser Ile Leu Trp Cys
465                 470
```

<210> 326
<211> 418
<212> PRT
<213> Homo sapiens
<400> 326

```
Met Arg Ser Leu Leu Leu Leu Ser Ala Phe Cys Leu Leu Glu Ala Ala
1               5                   10                  15
Leu Ala Ala Glu Val Lys Lys Pro Ala Ala Ala Ala Ala Pro Gly Thr
            20                  25                  30
Ala Glu Lys Leu Ser Pro Lys Ala Ala Thr Leu Ala Glu Arg Ser Ala
        35                  40                  45
Gly Leu Ala Phe Ser Leu Tyr Gln Ala Met Ala Lys Asp Gln Ala Val
    50                  55                  60
Glu Asn Ile Leu Val Ser Pro Val Val Val Ala Ser Ser Leu Gly Leu
65                  70                  75                  80
Val Ser Leu Gly Gly Lys Ala Thr Thr Ala Ser Gln Ala Lys Ala Val
                85                  90                  95
Leu Ser Ala Glu Gln Leu Arg Asp Glu Glu Val His Ala Gly Leu Gly
            100                 105                 110
Glu Leu Leu Arg Ser Leu Ser Asn Ser Thr Ala Arg Asn Val Thr Trp
        115                 120                 125
Lys Leu Gly Ser Arg Leu Tyr Gly Pro Ser Ser Val Ser Phe Ala Asp
    130                 135                 140
Asp Phe Val Arg Ser Ser Lys Gln His Tyr Asn Cys Glu His Ser Lys
145                 150                 155                 160
Ile Asn Phe Arg Asp Lys Arg Ser Ala Leu Gln Ser Ile Asn Glu Trp
                165                 170                 175
```

```
Ala Ala Gln Thr Thr Asp Gly Lys Leu Pro Glu Val Thr Lys Asp Val
            180                 185                 190
Glu Arg Thr Asp Gly Ala Leu Leu Val Asn Ala Met Phe Phe Lys Pro
        195                 200                 205
His Trp Asp Glu Lys Phe His His Lys Met Val Asp Asn Arg Gly Phe
    210                 215                 220
Met Val Thr Arg Ser Tyr Thr Val Gly Val Met Met Met His Arg Thr
225                 230                 235                 240
Gly Leu Tyr Asn Tyr Tyr Asp Asp Glu Lys Glu Lys Leu Gln Ile Val
                245                 250                 255
Glu Met Pro Leu Ala His Lys Leu Ser Ser Leu Ile Ile Leu Met Pro
            260                 265                 270
His His Val Glu Pro Leu Glu Arg Leu Glu Lys Leu Leu Thr Lys Glu
        275                 280                 285
Gln Leu Lys Ile Trp Met Gly Lys Met Gln Lys Lys Ala Val Ala Ile
    290                 295                 300
Ser Leu Pro Lys Gly Val Val Glu Val Thr His Asp Leu Gln Lys His
305                 310                 315                 320
Leu Ala Gly Leu Gly Leu Thr Glu Ala Ile Asp Lys Asn Lys Ala Asp
                325                 330                 335
Leu Ser Arg Met Ser Gly Lys Lys Asp Leu Tyr Leu Ala Ser Val Phe
            340                 345                 350
His Ala Thr Ala Phe Glu Leu Asp Thr Asp Gly Asn Pro Phe Asp Gln
        355                 360                 365
Asp Ile Tyr Gly Arg Glu Glu Leu Arg Ser Pro Lys Leu Phe Tyr Ala
    370                 375                 380
Asp His Pro Phe Ile Phe Leu Val Arg Asp Thr Gln Ser Gly Ser Leu
385                 390                 395                 400
Leu Phe Ile Gly Arg Leu Val Arg Pro Lys Gly Asp Lys Met Arg Asp
                405                 410                 415
Glu Leu
```

<210> 327
<211> 314
<212> PRT
<213> Homo sapiens
<400> 327

```
Met Asp Ala Phe Lys Gly Gly Met Ser Leu Glu Arg Leu Pro Glu Gly
1               5                   10                  15
Leu Arg Pro Pro Pro Pro Pro Pro His Asp Met Gly Pro Ala Phe His
            20                  25                  30
Leu Ala Arg Pro Ala Asp Pro Arg Glu Pro Leu Glu Asn Ser Ala Ser
        35                  40                  45
Glu Ser Ser Asp Thr Glu Leu Pro Glu Lys Glu Arg Gly Gly Glu Pro
    50                  55                  60
Lys Gly Pro Glu Asp Ser Gly Ala Gly Gly Thr Gly Cys Gly Gly Ala
65                  70                  75                  80
Asp Asp Pro Ala Lys Lys Lys Lys Gln Arg Arg Gln Arg Thr His Phe
                85                  90                  95
Thr Ser Gln Gln Leu Gln Glu Leu Glu Ala Thr Phe Gln Arg Asn Arg
            100                 105                 110
Tyr Pro Asp Met Ser Met Arg Glu Glu Ile Ala Val Trp Thr Asn Leu
        115                 120                 125
Thr Glu Pro Arg Val Arg Val Trp Phe Lys Asn Arg Arg Ala Lys Trp
    130                 135                 140
Arg Lys Arg Glu Arg Asn Gln Gln Leu Asp Leu Cys Lys Gly Gly Tyr
145                 150                 155                 160
Val Pro Gln Phe Ser Gly Leu Val Gln Pro Tyr Glu Asp Val Tyr Ala
                165                 170                 175
Ala Gly Tyr Ser Tyr Asn Asn Trp Ala Ala Lys Ser Leu Ala Pro Ala
            180                 185                 190
Pro Leu Ser Thr Lys Ser Phe Thr Phe Phe Asn Ser Met Ser Pro Leu
        195                 200                 205
Ser Ser Gln Ser Met Phe Ser Ala Pro Ser Ser Ile Ser Ser Met Thr
    210                 215                 220
Met Pro Ser Ser Met Gly Pro Gly Ala Val Pro Gly Met Pro Asn Ser
225                 230                 235                 240
Gly Leu Asn Asn Ile Asn Asn Leu Thr Gly Ser Ser Leu Asn Ser Ala
```

```
                245                 250                 255
Met Ser Pro Gly Ala Cys Pro Tyr Gly Thr Pro Ala Ser Pro Tyr Ser
            260                 265                 270
Val Tyr Arg Asp Thr Cys Asn Ser Ser Leu Ala Ser Leu Arg Leu Lys
        275                 280                 285
Ser Lys Gln His Ser Ser Phe Gly Tyr Gly Ala Leu Gln Gly Pro Ala
    290                 295                 300
Ser Gly Leu Asn Ala Cys Gln Tyr Asn Ser
305                 310
```

<210> 328
<211> 2828
<212> PRT
<213> Homo sapiens
<400> 328

```
Met Pro Lys Arg Ala His Trp Gly Ala Leu Ser Val Val Leu Ile Leu
1               5                   10                  15
Leu Trp Gly His Pro Arg Val Ala Leu Ala Cys Pro His Pro Cys Ala
            20                  25                  30
Cys Tyr Val Pro Ser Glu Val His Cys Thr Phe Arg Ser Leu Ala Ser
        35                  40                  45
Val Pro Ala Gly Ile Ala Arg His Val Glu Arg Ile Asn Leu Gly Phe
    50                  55                  60
Asn Ser Ile Gln Ala Leu Ser Glu Thr Ser Phe Ala Gly Leu Thr Lys
65                  70                  75                  80
Leu Glu Leu Leu Met Ile His Gly Asn Glu Ile Pro Ser Ile Pro Asp
                85                  90                  95
Gly Ala Leu Arg Asp Leu Ser Ser Leu Gln Val Phe Lys Phe Ser Tyr
            100                 105                 110
Asn Lys Leu Arg Val Ile Thr Gly Gln Thr Leu Gln Gly Leu Ser Asn
        115                 120                 125
Leu Met Arg Leu His Ile Asp His Asn Lys Ile Glu Phe Ile His Pro
    130                 135                 140
Gln Ala Phe Asn Gly Leu Thr Ser Leu Arg Leu Leu His Leu Glu Gly
145                 150                 155                 160
Asn Leu Leu His Gln Leu His Pro Ser Thr Phe Ser Thr Phe Thr Phe
                165                 170                 175
Leu Asp Tyr Phe Arg Leu Ser Thr Ile Arg His Leu Tyr Leu Ala Glu
            180                 185                 190
Asn Met Val Arg Thr Leu Pro Ala Ser Met Leu Arg Asn Met Pro Leu
        195                 200                 205
Leu Glu Asn Leu Tyr Leu Gln Gly Asn Pro Trp Thr Cys Asp Cys Glu
    210                 215                 220
Met Arg Trp Phe Leu Glu Trp Asp Ala Lys Ser Arg Gly Ile Leu Lys
225                 230                 235                 240
Cys Lys Lys Asp Lys Ala Tyr Glu Gly Gly Gln Leu Cys Ala Met Cys
                245                 250                 255
Phe Ser Pro Lys Lys Leu Tyr Lys His Glu Ile His Lys Leu Lys Asp
            260                 265                 270
Met Thr Cys Leu Lys Pro Ser Ile Glu Ser Pro Leu Arg Gln Asn Arg
        275                 280                 285
Ser Arg Ser Ile Glu Glu Glu Gln Glu Gln Glu Glu Asp Gly Gly Ser
    290                 295                 300
Gln Leu Ile Leu Glu Lys Phe Gln Leu Pro Gln Trp Ser Ile Ser Leu
305                 310                 315                 320
Asn Met Thr Asp Glu His Gly Asn Met Val Asn Leu Val Cys Asp Ile
                325                 330                 335
Lys Lys Pro Met Asp Val Tyr Lys Ile His Leu Asn Gln Thr Asp Pro
            340                 345                 350
Pro Asp Ile Asp Ile Asn Ala Thr Val Ala Leu Asp Phe Glu Cys Pro
        355                 360                 365
Met Thr Arg Glu Asn Tyr Glu Lys Leu Trp Lys Leu Ile Ala Tyr Tyr
    370                 375                 380
Ser Glu Val Pro Val Lys Leu His Arg Glu Leu Met Leu Ser Lys Asp
385                 390                 395                 400
Pro Arg Val Ser Tyr Gln Tyr Arg Gln Asp Ala Asp Glu Glu Ala Leu
                405                 410                 415
Tyr Tyr Thr Gly Val Arg Ala Gln Ile Leu Ala Glu Pro Glu Trp Val
            420                 425                 430
```

Met Gln Pro Ser Ile Asp Ile Gln Leu Asn Arg Arg Gln Ser Thr Ala
435 440 445
Lys Lys Val Leu Leu Ser Tyr Tyr Thr Gln Tyr Ser Gln Thr Ile Ser
450 455 460
Thr Lys Asp Thr Arg Gln Ala Arg Gly Arg Ser Trp Val Met Ile Glu
465 470 475 480
Pro Ser Gly Ala Val Gln Arg Asp Gln Thr Val Leu Glu Gly Gly Pro
485 490 495
Cys Gln Leu Ser Cys Asn Val Lys Ala Ser Glu Ser Pro Ser Ile Phe
500 505 510
Trp Val Leu Pro Asp Gly Ser Ile Leu Lys Ala Pro Met Asp Asp Pro
515 520 525
Asp Ser Lys Phe Ser Ile Leu Ser Ser Gly Trp Leu Arg Ile Lys Ser
530 535 540
Met Glu Pro Ser Asp Ser Gly Leu Tyr Gln Cys Ile Ala Gln Val Arg
545 550 555 560
Asp Glu Met Asp Arg Met Val Tyr Arg Val Leu Val Gln Ser Pro Ser
565 570 575
Thr Gln Pro Ala Glu Lys Asp Thr Val Thr Ile Gly Lys Asn Pro Gly
580 585 590
Glu Ser Val Thr Leu Pro Cys Asn Ala Leu Ala Ile Pro Glu Ala His
595 600 605
Leu Ser Trp Ile Leu Pro Asn Arg Arg Ile Ile Asn Asp Leu Ala Asn
610 615 620
Thr Ser His Val Tyr Met Leu Pro Asn Gly Thr Leu Ser Ile Pro Lys
625 630 635 640
Val Gln Val Ser Asp Ser Gly Tyr Tyr Arg Cys Val Ala Val Asn Gln
645 650 655
Gln Gly Ala Asp His Phe Thr Val Gly Ile Thr Val Thr Lys Lys Gly
660 665 670
Ser Gly Leu Pro Ser Lys Arg Gly Arg Arg Pro Gly Ala Lys Ala Leu
675 680 685
Ser Arg Val Arg Glu Asp Ile Val Glu Asp Glu Gly Gly Ser Gly Met
690 695 700
Gly Asp Glu Glu Asn Thr Ser Arg Arg Leu Leu His Pro Lys Asp Gln
705 710 715 720
Glu Val Phe Leu Lys Thr Lys Asp Asp Ala Ile Asn Gly Asp Lys Lys
725 730 735
Ala Lys Lys Gly Arg Arg Lys Leu Lys Leu Trp Lys His Ser Glu Lys
740 745 750
Glu Pro Glu Thr Asn Val Ala Glu Gly Arg Arg Val Phe Glu Ser Arg
755 760 765
Arg Arg Ile Asn Met Ala Asn Lys Gln Ile Asn Pro Glu Arg Trp Ala
770 775 780
Asp Ile Leu Ala Lys Val Arg Gly Lys Asn Leu Pro Lys Gly Thr Glu
785 790 795 800
Val Pro Pro Leu Ile Lys Thr Thr Ser Pro Pro Ser Leu Ser Leu Glu
805 810 815
Val Thr Pro Pro Phe Pro Ala Val Ser Pro Pro Ser Ala Ser Pro Val
820 825 830
Gln Thr Val Thr Ser Ala Glu Glu Ser Ser Ala Asp Val Pro Leu Leu
835 840 845
Gly Glu Glu Glu His Val Leu Gly Thr Ile Ser Ser Ala Ser Met Gly
850 855 860
Leu Glu His Asn His Asn Gly Val Ile Leu Val Glu Pro Glu Val Thr
865 870 875 880
Ser Thr Pro Leu Glu Glu Val Val Asp Asp Leu Ser Glu Lys Thr Glu
885 890 895
Glu Ile Thr Ser Thr Glu Gly Asp Leu Lys Gly Thr Ala Ala Pro Thr
900 905 910
Leu Ile Ser Glu Pro Tyr Glu Pro Ser Pro Thr Leu His Thr Leu Asp
915 920 925
Thr Val Tyr Glu Lys Pro Thr His Glu Glu Thr Ala Thr Glu Gly Trp
930 935 940
Ser Ala Ala Asp Val Gly Ser Ser Pro Glu Pro Thr Ser Ser Glu Tyr
945 950 955 960
Glu Pro Pro Leu Asp Ala Val Ser Leu Ala Glu Ser Glu Pro Met Gln
965 970 975
Tyr Phe Asp Pro Asp Leu Glu Thr Lys Ser Gln Pro Asp Glu Asp Lys

980 985 990
Met Lys Glu Asp Thr Phe Ala His Leu Thr Pro Thr Pro Thr Ile Trp
995 1000 1005
Val Asn Asp Ser Ser Thr Ser Gln Leu Phe Glu Asp Ser Thr Ile
1010 1015 1020
Gly Glu Pro Gly Val Pro Gly Gln Ser His Leu Gln Gly Leu Thr
1025 1030 1035
Asp Asn Ile His Leu Val Lys Ser Ser Leu Ser Thr Gln Asp Thr
1040 1045 1050
Leu Leu Ile Lys Lys Gly Met Lys Glu Met Ser Gln Thr Leu Gln
1055 1060 1065
Gly Gly Asn Met Leu Glu Gly Asp Pro Thr His Ser Arg Ser Ser
1070 1075 1080
Glu Ser Glu Gly Gln Glu Ser Lys Ser Ile Thr Leu Pro Asp Ser
1085 1090 1095
Thr Leu Gly Ile Met Ser Ser Met Ser Pro Val Lys Lys Pro Ala
1100 1105 1110
Glu Thr Thr Val Gly Thr Leu Leu Asp Lys Asp Thr Thr Thr Val
1115 1120 1125
Thr Thr Thr Pro Arg Gln Lys Val Ala Pro Ser Ser Thr Met Ser
1130 1135 1140
Thr His Pro Ser Arg Arg Arg Pro Asn Gly Arg Arg Arg Leu Arg
1145 1150 1155
Pro Asn Lys Phe Arg His Arg His Lys Gln Thr Pro Pro Thr Thr
1160 1165 1170
Phe Ala Pro Ser Glu Thr Phe Ser Thr Gln Pro Thr Gln Ala Pro
1175 1180 1185
Asp Ile Lys Ile Ser Ser Gln Val Glu Ser Ser Leu Val Pro Thr
1190 1195 1200
Ala Trp Val Asp Asn Thr Val Asn Thr Pro Lys Gln Leu Glu Met
1205 1210 1215
Glu Lys Asn Ala Glu Pro Thr Ser Lys Gly Thr Pro Arg Arg Lys
1220 1225 1230
His Gly Lys Arg Pro Asn Lys His Arg Tyr Thr Pro Ser Thr Val
1235 1240 1245
Ser Ser Arg Ala Ser Gly Ser Lys Pro Ser Pro Ser Pro Glu Asn
1250 1255 1260
Lys His Arg Asn Ile Val Thr Pro Ser Ser Glu Thr Ile Leu Leu
1265 1270 1275
Pro Arg Thr Val Ser Leu Lys Thr Glu Gly Pro Tyr Asp Ser Leu
1280 1285 1290
Asp Tyr Met Thr Thr Thr Arg Lys Ile Tyr Ser Ser Tyr Pro Lys
1295 1300 1305
Val Gln Glu Thr Leu Pro Val Thr Tyr Lys Pro Thr Ser Asp Gly
1310 1315 1320
Lys Glu Ile Lys Asp Asp Val Ala Thr Asn Val Asp Lys His Lys
1325 1330 1335
Ser Asp Ile Leu Val Thr Gly Glu Ser Ile Thr Asn Ala Ile Pro
1340 1345 1350
Thr Ser Arg Ser Leu Val Ser Thr Met Gly Glu Phe Lys Glu Glu
1355 1360 1365
Ser Ser Pro Val Gly Phe Pro Gly Thr Pro Thr Trp Asn Pro Ser
1370 1375 1380
Arg Thr Ala Gln Pro Gly Arg Leu Gln Thr Asp Ile Pro Val Thr
1385 1390 1395
Thr Ser Gly Glu Asn Leu Thr Asp Pro Pro Leu Leu Lys Glu Leu
1400 1405 1410
Glu Asp Val Asp Phe Thr Ser Glu Phe Leu Ser Ser Leu Thr Val
1415 1420 1425
Ser Thr Pro Phe His Gln Glu Glu Ala Gly Ser Ser Thr Thr Leu
1430 1435 1440
Ser Ser Ile Lys Val Glu Val Ala Ser Ser Gln Ala Glu Thr Thr
1445 1450 1455
Thr Leu Asp Gln Asp His Leu Glu Thr Thr Val Ala Ile Leu Leu
1460 1465 1470
Ser Glu Thr Arg Pro Gln Asn His Thr Pro Thr Ala Ala Arg Met
1475 1480 1485
Lys Glu Pro Ala Ser Ser Ser Pro Ser Thr Ile Leu Met Ser Leu
1490 1495 1500

Gly Gln Thr Thr Thr Thr Lys Pro Ala Leu Pro Ser Pro Arg Ile
1505 1510 1515
Ser Gln Ala Ser Arg Asp Ser Lys Glu Asn Val Phe Leu Asn Tyr
1520 1525 1530
Val Gly Asn Pro Glu Thr Glu Ala Thr Pro Val Asn Asn Glu Gly
1535 1540 1545
Thr Gln His Met Ser Gly Pro Asn Glu Leu Ser Thr Pro Ser Ser
1550 1555 1560
Asp Arg Asp Ala Phe Asn Leu Ser Thr Lys Leu Glu Leu Glu Lys
1565 1570 1575
Gln Val Phe Gly Ser Arg Ser Leu Pro Arg Gly Pro Asp Ser Gln
1580 1585 1590
Arg Gln Asp Gly Arg Val His Ala Ser His Gln Leu Thr Arg Val
1595 1600 1605
Pro Ala Lys Pro Ile Leu Pro Thr Ala Thr Val Arg Leu Pro Glu
1610 1615 1620
Met Ser Thr Gln Ser Ala Ser Arg Tyr Phe Val Thr Ser Gln Ser
1625 1630 1635
Pro Arg His Trp Thr Asn Lys Pro Glu Ile Thr Thr Tyr Pro Ser
1640 1645 1650
Gly Ala Leu Pro Glu Asn Lys Gln Phe Thr Thr Pro Arg Leu Ser
1655 1660 1665
Ser Thr Thr Ile Pro Leu Pro Leu His Met Ser Lys Pro Ser Ile
1670 1675 1680
Pro Ser Lys Phe Thr Asp Arg Arg Thr Asp Gln Phe Asn Gly Tyr
1685 1690 1695
Ser Lys Val Phe Gly Asn Asn Asn Ile Pro Glu Ala Arg Asn Pro
1700 1705 1710
Val Gly Lys Pro Pro Ser Pro Arg Ile Pro His Tyr Ser Asn Gly
1715 1720 1725
Arg Leu Pro Phe Phe Thr Asn Lys Thr Leu Ser Phe Pro Gln Leu
1730 1735 1740
Gly Val Thr Arg Arg Pro Gln Ile Pro Thr Ser Pro Ala Pro Val
1745 1750 1755
Met Arg Glu Arg Lys Val Ile Pro Gly Ser Tyr Asn Arg Ile His
1760 1765 1770
Ser His Ser Thr Phe His Leu Asp Phe Gly Pro Pro Ala Pro Pro
1775 1780 1785
Leu Leu His Thr Pro Gln Thr Thr Gly Ser Pro Ser Thr Asn Leu
1790 1795 1800
Gln Asn Ile Pro Met Val Ser Ser Thr Gln Ser Ser Ile Ser Phe
1805 1810 1815
Ile Thr Ser Ser Val Gln Ser Ser Gly Ser Phe His Gln Ser Ser
1820 1825 1830
Ser Lys Phe Phe Ala Gly Gly Pro Pro Ala Ser Lys Phe Trp Ser
1835 1840 1845
Leu Gly Glu Lys Pro Gln Ile Leu Thr Lys Ser Pro Gln Thr Val
1850 1855 1860
Ser Val Thr Ala Glu Thr Asp Thr Val Phe Pro Cys Glu Ala Thr
1865 1870 1875
Gly Lys Pro Lys Pro Phe Val Thr Trp Thr Lys Val Ser Thr Gly
1880 1885 1890
Ala Leu Met Thr Pro Asn Thr Arg Ile Gln Arg Phe Glu Val Leu
1895 1900 1905
Lys Asn Gly Thr Leu Val Ile Arg Lys Val Gln Val Gln Asp Arg
1910 1915 1920
Gly Gln Tyr Met Cys Thr Ala Ser Asn Leu His Gly Leu Asp Arg
1925 1930 1935
Met Val Val Leu Leu Ser Val Thr Val Gln Gln Pro Gln Ile Leu
1940 1945 1950
Ala Ser His Tyr Gln Asp Val Thr Val Tyr Leu Gly Asp Thr Ile
1955 1960 1965
Ala Met Glu Cys Leu Ala Lys Gly Thr Pro Ala Pro Gln Ile Ser
1970 1975 1980
Trp Ile Phe Pro Asp Arg Arg Val Trp Gln Thr Val Ser Pro Val
1985 1990 1995
Glu Ser Arg Ile Thr Leu His Glu Asn Arg Thr Leu Ser Ile Lys
2000 2005 2010
Glu Ala Ser Phe Ser Asp Arg Gly Val Tyr Lys Cys Val Ala Ser

2015 2020 2025
Asn Ala Ala Gly Ala Asp Ser Leu Ala Ile Arg Leu His Val Ala
2030 2035 2040
Ala Leu Pro Pro Val Ile His Gln Glu Lys Leu Glu Asn Ile Ser
2045 2050 2055
Leu Pro Pro Gly Leu Ser Ile His Ile His Cys Thr Ala Lys Ala
2060 2065 2070
Ala Pro Leu Pro Ser Val Arg Trp Val Leu Gly Asp Gly Thr Gln
2075 2080 2085
Ile Arg Pro Ser Gln Phe Leu His Gly Asn Leu Phe Val Phe Pro
2090 2095 2100
Asn Gly Thr Leu Tyr Ile Arg Asn Leu Ala Pro Lys Asp Ser Gly
2105 2110 2115
Arg Tyr Glu Cys Val Ala Ala Asn Leu Val Gly Ser Ala Arg Arg
2120 2125 2130
Thr Val Gln Leu Asn Val Gln Arg Ala Ala Ala Asn Ala Arg Ile
2135 2140 2145
Thr Gly Thr Ser Pro Arg Arg Thr Asp Val Arg Tyr Gly Gly Thr
2150 2155 2160
Leu Lys Leu Asp Cys Ser Ala Ser Gly Asp Pro Trp Pro Arg Ile
2165 2170 2175
Leu Trp Arg Leu Pro Ser Lys Arg Met Ile Asp Ala Leu Phe Ser
2180 2185 2190
Phe Asp Ser Arg Ile Lys Val Phe Ala Asn Gly Thr Leu Val Val
2195 2200 2205
Lys Ser Val Thr Asp Lys Asp Ala Gly Asp Tyr Leu Cys Val Ala
2210 2215 2220
Arg Asn Lys Val Gly Asp Asp Tyr Val Val Leu Lys Val Asp Val
2225 2230 2235
Val Met Lys Pro Ala Lys Ile Glu His Lys Glu Glu Asn Asp His
2240 2245 2250
Lys Val Phe Tyr Gly Gly Asp Leu Lys Val Asp Cys Val Ala Thr
2255 2260 2265
Gly Leu Pro Asn Pro Glu Ile Ser Trp Ser Leu Pro Asp Gly Ser
2270 2275 2280
Leu Val Asn Ser Phe Met Gln Ser Asp Asp Ser Gly Gly Arg Thr
2285 2290 2295
Lys Arg Tyr Val Val Phe Asn Asn Gly Thr Leu Tyr Phe Asn Glu
2300 2305 2310
Val Gly Met Arg Glu Glu Gly Asp Tyr Thr Cys Phe Ala Glu Asn
2315 2320 2325
Gln Val Gly Lys Asp Glu Met Arg Val Arg Val Lys Val Val Thr
2330 2335 2340
Ala Pro Ala Thr Ile Arg Asn Lys Thr Tyr Leu Ala Val Gln Val
2345 2350 2355
Pro Tyr Gly Asp Val Val Thr Val Ala Cys Glu Ala Lys Gly Glu
2360 2365 2370
Pro Met Pro Lys Val Thr Trp Leu Ser Pro Thr Asn Lys Val Ile
2375 2380 2385
Pro Thr Ser Ser Glu Lys Tyr Gln Ile Tyr Gln Asp Gly Thr Leu
2390 2395 2400
Leu Ile Gln Lys Ala Gln Arg Ser Asp Ser Gly Asn Tyr Thr Cys
2405 2410 2415
Leu Val Arg Asn Ser Ala Gly Glu Asp Arg Lys Thr Val Trp Ile
2420 2425 2430
His Val Asn Val Gln Pro Pro Lys Ile Asn Gly Asn Pro Asn Pro
2435 2440 2445
Ile Thr Thr Val Arg Glu Ile Ala Ala Gly Gly Ser Arg Lys Leu
2450 2455 2460
Ile Asp Cys Lys Ala Glu Gly Ile Pro Thr Pro Arg Val Leu Trp
2465 2470 2475
Ala Phe Pro Glu Gly Val Val Leu Pro Ala Pro Tyr Tyr Gly Asn
2480 2485 2490
Arg Ile Thr Val His Gly Asn Gly Ser Leu Asp Ile Arg Ser Leu
2495 2500 2505
Arg Lys Ser Asp Ser Val Gln Leu Val Cys Met Ala Arg Asn Glu
2510 2515 2520
Gly Gly Glu Ala Arg Leu Ile Val Gln Leu Thr Val Leu Glu Pro
2525 2530 2535

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Met Glu  Lys Pro Ile Phe His  Asp Pro Ile Ser Glu  Lys Ile Thr
    2540                 2545                 2550
Ala Met  Ala Gly His Thr Ile  Ser Leu Asn Cys Ser  Ala Ala Gly
    2555                 2560                 2565
Thr Pro  Thr Pro Ser Leu Val  Trp Val Leu Pro Asn  Gly Thr Asp
    2570                 2575                 2580
Leu Gln  Ser Gly Gln Gln Leu  Gln Arg Phe Tyr His  Lys Ala Asp
    2585                 2590                 2595
Gly Met  Leu His Ile Ser Gly  Leu Ser Ser Val Asp  Ala Gly Ala
    2600                 2605                 2610
Tyr Arg  Cys Val Ala Arg Asn  Ala Ala Gly His Thr  Glu Arg Leu
    2615                 2620                 2625
Val Ser  Leu Lys Val Gly Leu  Lys Pro Glu Ala Asn  Lys Gln Tyr
    2630                 2635                 2640
His Asn  Leu Val Ser Ile Ile  Asn Gly Glu Thr Leu  Lys Leu Pro
    2645                 2650                 2655
Cys Thr  Pro Pro Gly Ala Gly  Gln Gly Arg Phe Ser  Trp Thr Leu
    2660                 2665                 2670
Pro Asn  Gly Met His Leu Glu  Gly Pro Gln Thr Leu  Gly Arg Val
    2675                 2680                 2685
Ser Leu  Leu Asp Asn Gly Thr  Leu Thr Val Arg Glu  Ala Ser Val
    2690                 2695                 2700
Phe Asp  Arg Gly Thr Tyr Val  Cys Arg Met Glu Thr  Glu Tyr Gly
    2705                 2710                 2715
Pro Ser  Val Thr Ser Ile Pro  Val Ile Val Ile Ala  Tyr Pro Pro
    2720                 2725                 2730
Arg Ile  Thr Ser Glu Pro Thr  Pro Val Ile Tyr Thr  Arg Pro Gly
    2735                 2740                 2745
Asn Thr  Val Lys Leu Asn Cys  Met Ala Met Gly Ile  Pro Lys Ala
    2750                 2755                 2760
Asp Ile  Thr Trp Glu Leu Pro  Asp Lys Ser His Leu  Lys Ala Gly
    2765                 2770                 2775
Val Gln  Ala Arg Leu Tyr Gly  Asn Arg Phe Leu His  Pro Gln Gly
    2780                 2785                 2790
Ser Leu  Thr Ile Gln His Ala  Thr Gln Arg Asp Ala  Gly Phe Tyr
    2795                 2800                 2805
Lys Cys  Met Ala Lys Asn Ile  Leu Gly Ser Asp Ser  Lys Thr Thr
    2810                 2815                 2820
Tyr Ile  His Val Phe
    2825
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<210> 329
<211> 426
<212> PRT
<213> Homo sapiens
<400> 329

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Met Pro Leu Leu Trp Leu Arg Gly Phe Leu Leu Ala Ser Cys Trp Ile
1               5                  10                  15
Ile Val Arg Ser Ser Pro Thr Pro Gly Ser Glu Gly His Ser Ala Ala
            20                  25                  30
Pro Asp Cys Pro Ser Cys Ala Leu Ala Ala Leu Pro Lys Asp Val Pro
        35                  40                  45
Asn Ser Gln Pro Glu Met Val Glu Ala Val Lys Lys His Ile Leu Asn
    50                  55                  60
Met Leu His Leu Lys Lys Arg Pro Asp Val Thr Gln Pro Val Pro Lys
65                  70                  75                  80
Ala Ala Leu Leu Asn Ala Ile Arg Lys Leu His Val Gly Lys Val Gly
                85                  90                  95
Glu Asn Gly Tyr Val Glu Ile Glu Asp Asp Ile Gly Arg Arg Ala Glu
            100                 105                 110
Met Asn Glu Leu Met Glu Gln Thr Ser Glu Ile Ile Thr Phe Ala Glu
        115                 120                 125
Ser Gly Thr Ala Arg Lys Thr Leu His Phe Glu Ile Ser Lys Glu Gly
    130                 135                 140
Ser Asp Leu Ser Val Val Glu Arg Ala Glu Val Trp Leu Phe Leu Lys
145                 150                 155                 160
Val Pro Lys Ala Asn Arg Thr Arg Thr Lys Val Thr Ile Arg Leu Phe
                165                 170                 175
Gln Gln Gln Lys His Pro Gln Gly Ser Leu Asp Thr Gly Glu Glu Ala
```

```
            180                 185                 190
Glu Glu Val Gly Leu Lys Gly Glu Arg Ser Glu Leu Leu Ser Glu
        195                 200                 205
Lys Val Val Asp Ala Arg Lys Ser Thr Trp His Val Phe Pro Val Ser
    210                 215                 220
Ser Ser Ile Gln Arg Leu Leu Asp Gln Gly Lys Ser Ser Leu Asp Val
225                 230                 235                 240
Arg Ile Ala Cys Glu Gln Cys Gln Glu Ser Gly Ala Ser Leu Val Leu
                245                 250                 255
Leu Gly Lys Lys Lys Lys Lys Glu Glu Glu Gly Glu Gly Lys Lys Lys
            260                 265                 270
Gly Gly Gly Glu Gly Gly Ala Gly Ala Asp Glu Glu Lys Glu Gln Ser
        275                 280                 285
His Arg Pro Phe Leu Met Leu Gln Ala Arg Gln Ser Glu Asp His Pro
    290                 295                 300
His Arg Arg Arg Arg Arg Gly Leu Glu Cys Asp Gly Lys Val Asn Ile
305                 310                 315                 320
Cys Cys Lys Lys Gln Phe Phe Val Ser Phe Lys Asp Ile Gly Trp Asn
                325                 330                 335
Asp Trp Ile Ile Ala Pro Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly
            340                 345                 350
Glu Cys Pro Ser His Ile Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe
        355                 360                 365
His Ser Thr Val Ile Asn His Tyr Arg Met Arg Gly His Ser Pro Phe
    370                 375                 380
Ala Asn Leu Lys Ser Cys Cys Val Pro Thr Lys Leu Arg Pro Met Ser
385                 390                 395                 400
Met Leu Tyr Tyr Asp Asp Gly Gln Asn Ile Ile Lys Lys Asp Ile Gln
                405                 410                 415
Asn Met Ile Val Glu Glu Cys Gly Cys Ser
            420                 425
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<210> 330
<211> 6792
<212> PRT
<213> Homo sapiens
<400> 330

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Met Phe Ile Asn Ile Lys Ser Ile Leu Trp Met Cys Ser Thr Leu Ile
1               5                   10                  15
Val Thr His Ala Leu His Lys Val Lys Val Gly Lys Ser Pro Pro Val
            20                  25                  30
Arg Gly Ser Leu Ser Gly Lys Val Ser Leu Pro Cys His Phe Ser Thr
        35                  40                  45
Met Pro Thr Leu Pro Pro Ser Tyr Asn Thr Ser Glu Phe Leu Arg Ile
    50                  55                  60
Lys Trp Ser Lys Ile Glu Val Asp Lys Asn Gly Lys Asp Leu Lys Glu
65                  70                  75                  80
Thr Thr Val Leu Val Ala Gln Asn Gly Asn Ile Lys Ile Gly Gln Asp
                85                  90                  95
Tyr Lys Gly Arg Val Ser Val Pro Thr His Pro Glu Ala Val Gly Asp
            100                 105                 110
Ala Ser Leu Thr Val Val Lys Leu Leu Ala Ser Asp Ala Gly Leu Tyr
        115                 120                 125
Arg Cys Asp Val Met Tyr Gly Ile Glu Asp Thr Gln Asp Thr Val Ser
    130                 135                 140
Leu Thr Val Asp Gly Val Val Phe His Tyr Arg Ala Ala Thr Ser Arg
145                 150                 155                 160
Tyr Thr Leu Asn Phe Glu Ala Ala Gln Lys Ala Cys Leu Asp Val Gly
                165                 170                 175
Ala Val Ile Ala Thr Pro Glu Gln Leu Phe Ala Ala Tyr Glu Asp Gly
            180                 185                 190
Phe Glu Gln Cys Asp Ala Gly Trp Leu Ala Asp Gln Thr Val Arg Tyr
        195                 200                 205
Pro Ile Arg Ala Pro Arg Val Gly Cys Tyr Gly Asp Lys Met Gly Lys
    210                 215                 220
Ala Gly Val Arg Thr Tyr Gly Phe Arg Ser Pro Gln Glu Thr Tyr Asp
225                 230                 235                 240
Val Tyr Cys Tyr Val Asp His Leu Asp Gly Asp Val Phe His Leu Thr
                245                 250                 255
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Val Pro Ser Lys Phe Thr Phe Glu Glu Ala Ala Lys Glu Cys Glu Asn
            260                 265                 270
Gln Asp Ala Arg Leu Ala Thr Val Gly Glu Leu Gln Ala Ala Trp Arg
        275                 280                 285
Asn Gly Phe Asp Gln Cys Asp Tyr Gly Trp Leu Ser Asp Ala Ser Val
    290                 295                 300
Arg His Pro Val Thr Val Ala Arg Ala Gln Cys Gly Gly Gly Leu Leu
305                 310                 315                 320
Gly Val Arg Thr Leu Tyr Arg Phe Glu Asn Gln Thr Gly Phe Pro Pro
                325                 330                 335
Pro Asp Ser Arg Phe Asp Ala Tyr Cys Phe Lys Pro Lys Glu Ala Thr
            340                 345                 350
Thr Ile Asp Leu Ser Ile Leu Ala Glu Thr Ala Ser Pro Ser Leu Ser
        355                 360                 365
Lys Glu Pro Gln Met Val Ser Asp Arg Thr Thr Pro Ile Ile Pro Leu
    370                 375                 380
Val Asp Glu Leu Pro Val Ile Pro Thr Glu Phe Pro Pro Val Gly Asn
385                 390                 395                 400
Ile Val Ser Phe Glu Gln Lys Ala Thr Val Gln Pro Gln Ala Ile Thr
                405                 410                 415
Asp Ser Leu Ala Thr Lys Leu Pro Thr Pro Thr Gly Ser Thr Lys Lys
            420                 425                 430
Pro Trp Asp Met Asp Asp Tyr Ser Pro Ser Ala Ser Gly Pro Leu Gly
        435                 440                 445
Lys Leu Asp Ile Ser Glu Ile Lys Glu Glu Val Leu Gln Ser Thr Thr
    450                 455                 460
Gly Val Ser His Tyr Ala Thr Asp Ser Trp Asp Gly Val Val Glu Asp
465                 470                 475                 480
Lys Gln Thr Gln Glu Ser Val Thr Gln Ile Glu Gln Ile Glu Val Gly
                485                 490                 495
Pro Leu Val Thr Ser Met Glu Ile Leu Lys His Ile Pro Ser Lys Glu
            500                 505                 510
Phe Pro Val Thr Glu Thr Pro Leu Val Thr Ala Arg Met Ile Leu Glu
        515                 520                 525
Ser Lys Thr Glu Lys Lys Met Val Ser Thr Val Ser Glu Leu Val Thr
    530                 535                 540
Thr Gly His Tyr Gly Phe Thr Leu Gly Glu Glu Asp Asp Glu Asp Arg
545                 550                 555                 560
Thr Leu Thr Val Gly Ser Asp Glu Ser Thr Leu Ile Phe Asp Gln Ile
                565                 570                 575
Pro Glu Val Ile Thr Val Ser Lys Thr Ser Glu Asp Thr Ile His Thr
            580                 585                 590
His Leu Glu Asp Leu Glu Ser Val Ser Ala Ser Thr Thr Val Ser Pro
        595                 600                 605
Leu Ile Met Pro Asp Asn Asn Gly Ser Ser Met Asp Asp Trp Glu Glu
    610                 615                 620
Arg Gln Thr Ser Gly Arg Ile Thr Glu Glu Phe Leu Gly Lys Tyr Leu
625                 630                 635                 640
Ser Thr Thr Pro Phe Pro Ser Gln His Arg Thr Glu Ile Glu Leu Phe
                645                 650                 655
Pro Tyr Ser Gly Asp Lys Ile Leu Val Glu Gly Ile Ser Thr Val Ile
            660                 665                 670
Tyr Pro Ser Leu Gln Thr Glu Met Thr His Arg Arg Glu Arg Thr Glu
        675                 680                 685
Thr Leu Ile Pro Glu Met Arg Thr Asp Thr Tyr Thr Asp Glu Ile Gln
    690                 695                 700
Glu Glu Ile Thr Lys Ser Pro Phe Met Gly Lys Thr Glu Glu Glu Val
705                 710                 715                 720
Phe Ser Gly Met Lys Leu Ser Thr Ser Leu Ser Glu Pro Ile His Val
                725                 730                 735
Thr Glu Ser Ser Val Glu Met Thr Lys Ser Phe Asp Phe Pro Thr Leu
            740                 745                 750
Ile Thr Lys Leu Ser Ala Glu Pro Thr Glu Val Arg Asp Met Glu Glu
        755                 760                 765
Asp Phe Thr Ala Thr Pro Gly Thr Thr Lys Tyr Asp Glu Asn Ile Thr
    770                 775                 780
Thr Val Leu Leu Ala His Gly Thr Leu Ser Val Glu Ala Ala Thr Val
785                 790                 795                 800
Ser Lys Trp Ser Trp Asp Glu Asp Asn Thr Thr Ser Lys Pro Leu Glu
```

805 810 815
Ser Thr Glu Pro Ser Ala Ser Ser Lys Leu Pro Pro Ala Leu Leu Thr
820 825 830
Thr Val Gly Met Asn Gly Lys Asp Lys Asp Ile Pro Ser Phe Thr Glu
835 840 845
Asp Gly Ala Asp Glu Phe Thr Leu Ile Pro Asp Ser Thr Gln Lys Gln
850 855 860
Leu Glu Glu Val Thr Asp Glu Asp Ile Ala Ala His Gly Lys Phe Thr
865 870 875 880
Ile Arg Phe Gln Pro Thr Thr Ser Thr Gly Ile Ala Glu Lys Ser Thr
885 890 895
Leu Arg Asp Ser Thr Thr Glu Glu Lys Val Pro Pro Ile Thr Ser Thr
900 905 910
Glu Gly Gln Val Tyr Ala Thr Met Glu Gly Ser Ala Leu Gly Glu Val
915 920 925
Glu Asp Val Asp Leu Ser Lys Pro Val Ser Thr Val Pro Gln Phe Ala
930 935 940
His Thr Ser Glu Val Glu Gly Leu Ala Phe Val Ser Tyr Ser Ser Thr
945 950 955 960
Gln Glu Pro Thr Thr Tyr Val Asp Ser Ser His Thr Ile Pro Leu Ser
965 970 975
Val Ile Pro Lys Thr Asp Trp Gly Val Leu Val Pro Ser Val Pro Ser
980 985 990
Glu Asp Glu Val Leu Gly Glu Pro Ser Gln Asp Ile Leu Val Ile Asp
995 1000 1005
Gln Thr Arg Leu Glu Ala Thr Ile Ser Pro Glu Thr Met Arg Thr
1010 1015 1020
Thr Lys Ile Thr Glu Gly Thr Thr Gln Glu Glu Phe Pro Trp Lys
1025 1030 1035
Glu Gln Thr Ala Glu Lys Pro Val Pro Ala Leu Ser Ser Thr Ala
1040 1045 1050
Trp Thr Pro Lys Glu Ala Val Thr Pro Leu Asp Glu Gln Glu Gly
1055 1060 1065
Asp Gly Ser Ala Tyr Thr Val Ser Glu Asp Glu Leu Leu Thr Gly
1070 1075 1080
Ser Glu Arg Val Pro Val Leu Glu Thr Thr Pro Val Gly Lys Ile
1085 1090 1095
Asp His Ser Val Ser Tyr Pro Pro Gly Ala Val Thr Glu His Lys
1100 1105 1110
Val Lys Thr Asp Glu Val Val Thr Leu Thr Pro Arg Ile Gly Pro
1115 1120 1125
Lys Val Ser Leu Ser Pro Gly Pro Glu Gln Lys Tyr Glu Thr Glu
1130 1135 1140
Gly Ser Ser Thr Thr Gly Phe Thr Ser Ser Leu Ser Pro Phe Ser
1145 1150 1155
Thr His Ile Thr Gln Leu Met Glu Glu Thr Thr Thr Glu Lys Thr
1160 1165 1170
Ser Leu Glu Asp Ile Asp Leu Gly Ser Gly Leu Phe Glu Lys Pro
1175 1180 1185
Lys Ala Thr Glu Leu Ile Glu Phe Ser Thr Ile Lys Val Thr Val
1190 1195 1200
Pro Ser Asp Ile Thr Thr Ala Phe Ser Ser Val Asp Arg Leu His
1205 1210 1215
Thr Thr Ser Ala Phe Lys Pro Ser Ser Ala Ile Thr Lys Lys Pro
1220 1225 1230
Pro Leu Ile Asp Arg Glu Pro Gly Glu Glu Thr Thr Ser Asp Met
1235 1240 1245
Val Ile Ile Gly Glu Ser Thr Ser His Val Pro Pro Thr Thr Leu
1250 1255 1260
Glu Asp Ile Val Ala Lys Glu Thr Glu Thr Asp Ile Asp Arg Glu
1265 1270 1275
Tyr Phe Thr Thr Ser Ser Pro Pro Ala Thr Gln Pro Thr Arg Pro
1280 1285 1290
Pro Thr Val Glu Asp Lys Glu Ala Phe Gly Pro Gln Ala Leu Ser
1295 1300 1305
Thr Pro Gln Pro Pro Ala Ser Thr Lys Phe His Pro Asp Ile Asn
1310 1315 1320
Val Tyr Ile Ile Glu Val Arg Glu Asn Lys Thr Gly Arg Met Ser
1325 1330 1335

Asp Leu Ser Val Ile Gly His Pro Ile Asp Ser Glu Ser Lys Glu
1340 1345 1350
Asp Glu Pro Cys Ser Glu Glu Thr Asp Pro Val His Asp Leu Met
1355 1360 1365
Ala Glu Ile Leu Pro Glu Phe Pro Asp Ile Ile Glu Ile Asp Leu
1370 1375 1380
Tyr His Ser Glu Glu Asn Glu Glu Glu Glu Glu Glu Cys Ala Asn
1385 1390 1395
Ala Thr Asp Val Thr Thr Thr Pro Ser Val Gln Tyr Ile Asn Gly
1400 1405 1410
Lys His Leu Val Thr Thr Val Pro Lys Asp Pro Glu Ala Ala Glu
1415 1420 1425
Ala Arg Arg Gly Gln Phe Glu Ser Val Ala Pro Ser Gln Asn Phe
1430 1435 1440
Ser Asp Ser Ser Glu Ser Asp Thr His Pro Phe Val Ile Ala Lys
1445 1450 1455
Thr Glu Leu Ser Thr Ala Val Gln Pro Asn Glu Ser Thr Glu Thr
1460 1465 1470
Thr Glu Ser Leu Glu Val Thr Trp Lys Pro Glu Thr Tyr Pro Glu
1475 1480 1485
Thr Ser Glu His Phe Ser Gly Gly Glu Pro Asp Val Phe Pro Thr
1490 1495 1500
Val Pro Phe His Glu Glu Phe Glu Ser Gly Thr Ala Lys Lys Gly
1505 1510 1515
Ala Glu Ser Val Thr Glu Arg Asp Thr Glu Val Gly His Gln Ala
1520 1525 1530
His Glu His Thr Glu Pro Val Ser Leu Phe Pro Glu Glu Ser Ser
1535 1540 1545
Gly Glu Ile Ala Ile Asp Gln Glu Ser Gln Lys Ile Ala Phe Ala
1550 1555 1560
Arg Ala Thr Glu Val Thr Phe Gly Glu Glu Val Glu Lys Ser Thr
1565 1570 1575
Ser Val Thr Tyr Thr Pro Thr Ile Val Pro Ser Ser Ala Ser Ala
1580 1585 1590
Tyr Val Ser Glu Glu Glu Ala Val Thr Leu Ile Gly Asn Pro Trp
1595 1600 1605
Pro Asp Asp Leu Leu Ser Thr Lys Glu Ser Trp Val Glu Ala Thr
1610 1615 1620
Pro Arg Gln Val Val Glu Leu Ser Gly Ser Ser Ser Ile Pro Ile
1625 1630 1635
Thr Glu Gly Ser Gly Glu Ala Glu Glu Asp Glu Asp Thr Met Phe
1640 1645 1650
Thr Met Val Thr Asp Leu Ser Gln Arg Asn Thr Thr Asp Thr Leu
1655 1660 1665
Ile Thr Leu Asp Thr Ser Arg Ile Ile Thr Glu Ser Phe Phe Glu
1670 1675 1680
Val Pro Ala Thr Thr Ile Tyr Pro Val Ser Glu Gln Pro Ser Ala
1685 1690 1695
Lys Val Val Pro Thr Lys Phe Val Ser Glu Thr Asp Thr Ser Glu
1700 1705 1710
Trp Ile Ser Ser Thr Thr Val Glu Glu Lys Lys Arg Lys Glu Glu
1715 1720 1725
Glu Gly Thr Thr Gly Thr Ala Ser Thr Phe Glu Val Tyr Ser Ser
1730 1735 1740
Thr Gln Arg Ser Asp Gln Leu Ile Leu Pro Phe Glu Leu Glu Ser
1745 1750 1755
Pro Asn Val Ala Thr Ser Ser Asp Ser Gly Thr Arg Lys Ser Phe
1760 1765 1770
Met Ser Leu Thr Thr Pro Thr Gln Ser Glu Arg Glu Met Thr Asp
1775 1780 1785
Ser Thr Pro Val Phe Thr Glu Thr Asn Thr Leu Glu Asn Leu Gly
1790 1795 1800
Ala Gln Thr Thr Glu His Ser Ser Ile His Gln Pro Gly Val Gln
1805 1810 1815
Glu Gly Leu Thr Thr Leu Pro Arg Ser Pro Ala Ser Val Phe Met
1820 1825 1830
Glu Gln Gly Ser Gly Glu Ala Ala Ala Asp Pro Glu Thr Thr Thr
1835 1840 1845
Val Ser Ser Phe Ser Leu Asn Val Glu Tyr Ala Ile Gln Ala Glu

1850 1855 1860
Lys Glu Val Ala Gly Thr Leu Ser Pro His Val Glu Thr Thr Phe
1865 1870 1875
Ser Thr Glu Pro Thr Gly Leu Val Leu Ser Thr Val Met Asp Arg
1880 1885 1890
Val Val Ala Glu Asn Ile Thr Gln Thr Ser Arg Glu Ile Val Ile
1895 1900 1905
Ser Glu Arg Leu Gly Glu Pro Asn Tyr Gly Ala Glu Ile Arg Gly
1910 1915 1920
Phe Ser Thr Gly Phe Pro Leu Glu Glu Asp Phe Ser Gly Asp Phe
1925 1930 1935
Arg Glu Tyr Ser Thr Val Ser His Pro Ile Ala Lys Glu Glu Thr
1940 1945 1950
Val Met Met Glu Gly Ser Gly Asp Ala Ala Phe Arg Asp Thr Gln
1955 1960 1965
Thr Ser Pro Ser Thr Val Pro Thr Ser Val His Ile Ser His Ile
1970 1975 1980
Ser Asp Ser Glu Gly Pro Ser Ser Thr Met Val Ser Thr Ser Ala
1985 1990 1995
Phe Pro Trp Glu Glu Phe Thr Ser Ser Ala Glu Gly Ser Gly Glu
2000 2005 2010
Gln Leu Val Thr Val Ser Ser Ser Val Val Pro Val Leu Pro Ser
2015 2020 2025
Ala Val Gln Lys Phe Ser Gly Thr Ala Ser Ser Ile Ile Asp Glu
2030 2035 2040
Gly Leu Gly Glu Val Gly Thr Val Asn Glu Ile Asp Arg Arg Ser
2045 2050 2055
Thr Ile Leu Pro Thr Ala Glu Val Glu Gly Thr Lys Ala Pro Val
2060 2065 2070
Glu Lys Glu Glu Val Lys Val Ser Gly Thr Val Ser Thr Asn Phe
2075 2080 2085
Pro Gln Thr Ile Glu Pro Ala Lys Leu Trp Ser Arg Gln Glu Val
2090 2095 2100
Asn Pro Val Arg Gln Glu Ile Glu Ser Glu Thr Thr Ser Glu Glu
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Gln Ile Gln Glu Glu Lys Ser Phe Glu Ser Pro Gln Asn Ser Pro
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Ala Thr Glu Gln Thr Ile Phe Asp Ser Gln Thr Phe Thr Glu Thr
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Glu Leu Lys Thr Thr Asp Tyr Ser Val Leu Thr Thr Lys Lys Thr
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Tyr Ser Asp Asp Lys Glu Met Lys Glu Glu Asp Thr Ser Leu Val
2165 2170 2175
Asn Met Ser Thr Pro Asp Pro Asp Ala Asn Gly Leu Glu Ser Tyr
2180 2185 2190
Thr Thr Leu Pro Glu Ala Thr Glu Lys Ser His Phe Phe Leu Ala
2195 2200 2205
Thr Ala Leu Val Thr Glu Ser Ile Pro Ala Glu His Val Val Thr
2210 2215 2220
Asp Ser Pro Ile Lys Lys Glu Glu Ser Thr Lys His Phe Pro Lys
2225 2230 2235
Gly Met Arg Pro Thr Ile Gln Glu Ser Asp Thr Glu Leu Leu Phe
2240 2245 2250
Ser Gly Leu Gly Ser Gly Glu Glu Val Leu Pro Thr Leu Pro Thr
2255 2260 2265
Glu Ser Val Asn Phe Thr Glu Val Glu Gln Ile Asn Asn Thr Leu
2270 2275 2280
Tyr Pro His Thr Ser Gln Val Glu Ser Thr Ser Ser Asp Lys Ile
2285 2290 2295
Glu Asp Phe Asn Arg Met Glu Asn Val Ala Lys Glu Val Gly Pro
2300 2305 2310
Leu Val Ser Gln Thr Asp Ile Phe Glu Gly Ser Gly Ser Val Thr
2315 2320 2325
Ser Thr Thr Leu Ile Glu Ile Leu Ser Asp Thr Gly Ala Glu Gly
2330 2335 2340
Pro Thr Val Ala Pro Leu Pro Phe Ser Thr Asp Ile Gly His Pro
2345 2350 2355
Gln Asn Gln Thr Val Arg Trp Ala Glu Glu Ile Gln Thr Ser Arg
2360 2365 2370

Pro Gln Thr Ile Thr Glu Gln Asp Ser Asn Lys Asn Ser Ser Thr
2375 2380 2385
Ala Glu Ile Asn Glu Thr Thr Thr Ser Ser Thr Asp Phe Leu Ala
2390 2395 2400
Arg Ala Tyr Gly Phe Glu Met Ala Lys Glu Phe Val Thr Ser Ala
2405 2410 2415
Pro Lys Pro Ser Asp Leu Tyr Tyr Glu Pro Ser Gly Glu Gly Ser
2420 2425 2430
Gly Glu Val Asp Ile Val Asp Ser Phe His Thr Ser Ala Thr Thr
2435 2440 2445
Gln Ala Thr Arg Gln Glu Ser Ser Thr Thr Phe Val Ser Asp Gly
2450 2455 2460
Ser Leu Glu Lys His Pro Glu Val Pro Ser Ala Lys Ala Val Thr
2465 2470 2475
Ala Asp Gly Phe Pro Thr Val Ser Val Met Leu Pro Leu His Ser
2480 2485 2490
Glu Gln Asn Lys Ser Ser Pro Asp Pro Thr Ser Thr Leu Ser Asn
2495 2500 2505
Thr Val Ser Tyr Glu Arg Ser Thr Asp Gly Ser Phe Gln Asp Arg
2510 2515 2520
Phe Arg Glu Phe Glu Asp Ser Thr Leu Lys Pro Asn Arg Lys Lys
2525 2530 2535
Pro Thr Glu Asn Ile Ile Ile Asp Leu Asp Lys Glu Asp Lys Asp
2540 2545 2550
Leu Ile Leu Thr Ile Thr Glu Ser Thr Ile Leu Glu Ile Leu Pro
2555 2560 2565
Glu Leu Thr Ser Asp Lys Asn Thr Ile Ile Asp Ile Asp His Thr
2570 2575 2580
Lys Pro Val Tyr Glu Asp Ile Leu Gly Met Gln Thr Asp Ile Asp
2585 2590 2595
Thr Glu Val Pro Ser Glu Pro His Asp Ser Asn Asp Glu Ser Asn
2600 2605 2610
Asp Asp Ser Thr Gln Val Gln Glu Ile Tyr Glu Ala Ala Val Asn
2615 2620 2625
Leu Ser Leu Thr Glu Glu Thr Phe Glu Gly Ser Ala Asp Val Leu
2630 2635 2640
Ala Ser Tyr Thr Gln Ala Thr His Asp Glu Ser Met Thr Tyr Glu
2645 2650 2655
Asp Arg Ser Gln Leu Asp His Met Gly Phe His Phe Thr Thr Gly
2660 2665 2670
Ile Pro Ala Pro Ser Thr Glu Thr Glu Leu Asp Val Leu Leu Pro
2675 2680 2685
Thr Ala Thr Ser Leu Pro Ile Pro Arg Lys Ser Ala Thr Val Ile
2690 2695 2700
Pro Glu Ile Glu Gly Ile Lys Ala Glu Ala Lys Ala Leu Asp Asp
2705 2710 2715
Met Phe Glu Ser Ser Thr Leu Ser Asp Gly Gln Ala Ile Ala Asp
2720 2725 2730
Gln Ser Glu Ile Ile Pro Thr Leu Gly Gln Phe Glu Arg Thr Gln
2735 2740 2745
Glu Glu Tyr Glu Asp Lys Lys His Ala Gly Pro Ser Phe Gln Pro
2750 2755 2760
Glu Phe Ser Ser Gly Ala Glu Glu Ala Leu Val Asp His Thr Pro
2765 2770 2775
Tyr Leu Ser Ile Ala Thr Thr His Leu Met Asp Gln Ser Val Thr
2780 2785 2790
Glu Val Pro Asp Val Met Glu Gly Ser Asn Pro Pro Tyr Tyr Thr
2795 2800 2805
Asp Thr Thr Leu Ala Val Ser Thr Phe Ala Lys Leu Ser Ser Gln
2810 2815 2820
Thr Pro Ser Ser Pro Leu Thr Ile Tyr Ser Gly Ser Glu Ala Ser
2825 2830 2835
Gly His Thr Glu Ile Pro Gln Pro Ser Ala Leu Pro Gly Ile Asp
2840 2845 2850
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    130                 135                 140
Val Thr Glu Leu Thr His Arg Ile Arg Ser Lys Ser Ser Pro Asp Glu
145                 150                 155                 160
Asn Glu Asn Glu Val Glu Asp Ser Ala Asp Phe Val Ser Phe Phe Pro
                165                 170                 175
Asp Phe Val Trp Thr Leu Arg Asp Phe Ser Leu Asp Leu Glu Ala Asp
            180                 185                 190
Gly Gln Pro Leu Thr Pro Asp Glu Tyr Leu Thr Tyr Ser Leu Lys Leu
        195                 200                 205
Lys Lys Gly Thr Ser Gln Lys Asp Glu Thr Phe Asn Leu Pro Arg Leu
    210                 215                 220
Cys Ile Arg Lys Phe Phe Pro Lys Lys Lys Cys Phe Val Phe Asp Arg
225                 230                 235                 240
Pro Val His Arg Arg Lys Leu Ala Gln Leu Glu Lys Leu Gln Asp Glu
                245                 250                 255
Glu Leu Asp Pro Glu Phe Val Gln Gln Val Ala Asp Phe Cys Ser Tyr
            260                 265                 270
Ile Phe Ser Asn Ser Lys Thr Lys Thr Leu Ser Gly Gly Ile Gln Val
        275                 280                 285
Asn Gly Pro Arg Leu Glu Ser Leu Val Leu Thr Tyr Val Asn Ala Ile
    290                 295                 300
Ser Ser Gly Asp Leu Pro Cys Met Glu Asn Ala Val Leu Ala Leu Ala
305                 310                 315                 320
Gln Ile Glu Asn Ser Ala Ala Val Gln Lys Ala Ile Ala His Tyr Glu
                325                 330                 335
Gln Gln Met Gly Gln Lys Val Gln Leu Pro Thr Glu Ser Leu Gln Glu
            340                 345                 350
Leu Leu Asp Leu His Arg Asp Ser Glu Arg Glu Ala Ile Glu Val Phe
        355                 360                 365
Ile Arg Ser Ser Phe Lys Asp Val Asp His Leu Phe Gln Lys Glu Leu
    370                 375                 380
Ala Ala Gln Leu Glu Lys Lys Arg Asp Asp Phe Cys Lys Gln Asn Gln
385                 390                 395                 400
Glu Ala Ser Ser Asp Arg Cys Ser Gly Leu Leu Gln Val Ile Phe Ser
                405                 410                 415
Pro Leu Glu Glu Glu Val Lys Ala Gly Ile Tyr Ser Lys Pro Gly Gly
            420                 425                 430
Tyr Arg Leu Phe Val Gln Lys Leu Gln Asp Leu Lys Lys Lys Tyr Tyr
        435                 440                 445
Glu Glu Pro Arg Lys Gly Ile Gln Ala Glu Glu Ile Leu Gln Thr Tyr
    450                 455                 460
Leu Lys Ser Lys Glu Ser Met Thr Asp Ala Ile Leu Gln Thr Asp Gln
465                 470                 475                 480
Thr Leu Thr Glu Lys Glu Lys Glu Ile Glu Val Glu Arg Val Lys Ala
                485                 490                 495
Glu Ser Ala Gln Ala Ser Ala Lys Met Leu Gln Glu Met Gln Arg Lys
            500                 505                 510
Asn Glu Gln Met Met Glu Gln Lys Glu Arg Ser Tyr Gln Glu His Leu
        515                 520                 525
Lys Gln Leu Thr Glu Lys Met Glu Asn Asp Arg Val Gln Leu Leu Lys
    530                 535                 540
Glu Gln Glu Arg Thr Leu Ala Leu Lys Leu Gln Glu Gln Glu Gln Leu
545                 550                 555                 560
Leu Lys Glu Gly Phe Gln Lys Glu Ser Arg Ile Met Lys Asn Glu Ile
                565                 570                 575
Gln Asp Leu Gln Thr Lys Met Arg Arg Arg Lys Ala Cys Thr Ile Ser
            580                 585                 590
```

<210> 494
<211> 632
<212> PRT
<213> Homo sapiens
<400> 494

Met Ser Arg Val Arg Asp Ala Gly Cys Val Ala Ala Gly Ile Val Ile
1 5 10 15
Gly Ala Gly Ala Trp Tyr Cys Val Tyr Lys Tyr Thr Arg Gly Arg Asp
20 25 30
Gln Thr Lys Lys Arg Met Ala Lys Pro Lys Asn Arg Ala Val Ala Gly
35 40 45
Thr Gly Ala Arg Ala Arg Ala Gly Leu Arg Ala Gly Phe Thr Ile Asp
50 55 60
Leu Gly Ser Gly Phe Ser Pro Pro Thr Pro Val Arg Ala Glu Ala Glu
65 70 75 80
Asp Arg Ala Gln Asp Glu Ala Ser Ala Leu Asp Thr Val Gly Ala Glu
85 90 95
Ala Val Ala Pro Ala Ala Ser Ser Ala Glu Ala Gln Ser Gly Ala Gly
100 105 110
Ser Gln Ala Gln Glu Ala Asp Gly Ala Gly Val Gly Pro Lys Ala Glu
115 120 125
Ser Val Val Gly Ala Ala Met Ala Ser Ala Ile Ala Pro Pro Pro Gly
130 135 140
Val Thr Glu Ala Leu Gly Ala Ala Glu Ala Pro Ala Met Ala Gly Ala
145 150 155 160
Pro Lys Val Ala Glu Ala Pro Arg Glu Ala Glu Thr Ser Arg Ala Ala
165 170 175
Val Pro Pro Gly Thr Val Val Pro Thr Glu Ala Ala Ala Pro Thr Glu
180 185 190
Val Thr Glu Gly Pro Gly Val Ala Ala Pro Thr Lys Val Ala Glu Ala
195 200 205
Pro Gly Val Ala Ser Pro Thr Glu Ala Ala Glu Ala Pro Val Pro Ala
210 215 220
Thr Pro Thr Gly Ala Ala Ala Pro Thr Gly Ala Ala Glu Ser Pro Gly
225 230 235 240
Thr Ser Gly Ser Pro Arg Thr Ala Val Val Pro Gly Thr Ser Ala Ala
245 250 255
Lys Lys Ala Thr Pro Gly Ala His Thr Gly Ala Ile Pro Lys Ala Thr
260 265 270
Ser Ala Thr Gly Ala Val Pro Lys Gly Gly Gly Lys Gly Val Thr Arg
275 280 285
Ser Arg Asn Gly Gly Lys Gly Lys Gly Lys Lys Ser Lys Val Glu Val
290 295 300
Asp Glu Leu Gly Met Gly Phe Arg Pro Gly Asp Gly Ala Ala Ala Ala
305 310 315 320
Ala Ala Ala Ser Ala Asn Gly Gly Gln Ala Phe Leu Ala Glu Val Pro
325 330 335
Asp Ser Glu Glu Gly Glu Ser Gly Trp Thr Asp Thr Glu Ser Asp Ser
340 345 350
Asp Ser Glu Pro Glu Thr Gln Arg Arg Gly Arg Gly Arg Arg Pro Val
355 360 365
Ala Met Gln Lys Arg Pro Phe Pro Tyr Glu Ile Asp Glu Ile Leu Gly
370 375 380
Val Arg Asp Leu Arg Lys Val Leu Ala Leu Leu Gln Lys Ser Asp Asp
385 390 395 400
Pro Phe Ile Gln Gln Val Ala Leu Leu Thr Leu Ser Asn Asn Ala Asn
405 410 415
Tyr Ser Cys Asn Gln Glu Thr Ile Arg Lys Leu Gly Gly Leu Pro Ile
420 425 430
Ile Ala Asn Met Ile Asn Lys Thr Asp Pro His Ile Lys Glu Lys Ala
435 440 445
Leu Met Ala Met Asn Asn Leu Ser Glu Asn Tyr Glu Asn Gln Gly Arg
450 455 460
Leu Gln Val Tyr Met Asn Lys Val Met Asp Asp Ile Met Ala Ser Asn
465 470 475 480
Leu Asn Ser Ala Val Gln Val Val Gly Leu Lys Phe Leu Thr Asn Met
485 490 495
Thr Ile Thr Asn Asp Tyr Gln His Leu Leu Val Asn Ser Ile Ala Asn

```
                500                 505                 510
Phe Phe Arg Leu Leu Ser Gln Gly Gly Gly Lys Ile Lys Val Glu Ile
            515                 520                 525
Leu Lys Ile Leu Ser Asn Phe Ala Glu Asn Pro Asp Met Leu Lys Lys
        530                 535                 540
Leu Leu Ser Thr Gln Val Pro Ala Ser Phe Ser Ser Leu Tyr Asn Ser
545                 550                 555                 560
Tyr Val Glu Ser Glu Ile Leu Ile Asn Ala Leu Thr Leu Phe Glu Ile
                565                 570                 575
Ile Tyr Asp Asn Leu Arg Ala Glu Val Phe Asn Tyr Arg Glu Phe Asn
            580                 585                 590
Lys Gly Ser Leu Phe Tyr Leu Cys Thr Thr Ser Gly Val Cys Val Lys
        595                 600                 605
Lys Ile Arg Ala Leu Ala Asn His His Asp Leu Leu Val Lys Val Lys
    610                 615                 620
Val Ile Lys Leu Val Asn Lys Phe
625                 630
```

<210> 495
<211> 219
<212> PRT
<213> Homo sapiens
<400> 495

```
Met Gly Met Ser Ser Leu Lys Leu Leu Lys Tyr Val Leu Phe Phe Phe
1               5                   10                  15
Asn Leu Leu Phe Trp Ile Cys Gly Cys Cys Ile Leu Gly Phe Gly Ile
            20                  25                  30
Tyr Leu Leu Ile His Asn Asn Phe Gly Val Leu Phe His Asn Leu Pro
        35                  40                  45
Ser Leu Thr Leu Gly Asn Val Phe Val Ile Val Gly Ser Ile Ile Met
    50                  55                  60
Val Val Ala Phe Leu Gly Cys Met Gly Ser Ile Lys Glu Asn Lys Cys
65                  70                  75                  80
Leu Leu Met Ser Phe Phe Ile Leu Leu Leu Ile Ile Leu Leu Ala Glu
                85                  90                  95
Val Thr Leu Ala Ile Leu Leu Phe Val Tyr Glu Gln Lys Leu Asn Glu
            100                 105                 110
Tyr Val Ala Lys Gly Leu Thr Asp Ser Ile His Arg Tyr His Ser Asp
        115                 120                 125
Asn Ser Thr Lys Ala Ala Trp Asp Ser Ile Gln Ser Phe Leu Gln Cys
    130                 135                 140
Cys Gly Ile Asn Gly Thr Ser Asp Trp Thr Ser Gly Pro Pro Ala Ser
145                 150                 155                 160
Cys Pro Ser Asp Arg Lys Val Glu Gly Cys Tyr Ala Lys Ala Arg Leu
                165                 170                 175
Trp Phe His Ser Asn Phe Leu Tyr Ile Gly Ile Ile Thr Ile Cys Val
            180                 185                 190
Cys Val Ile Glu Val Leu Gly Met Ser Phe Ala Leu Thr Leu Asn Cys
        195                 200                 205
Gln Ile Asp Lys Thr Ser Gln Thr Ile Gly Leu
    210                 215
```

<210> 496
<211> 739
<212> PRT
<213> Homo sapiens
<400> 496

```
Met Pro Gly Lys Met Val Val Ile Leu Gly Ala Ser Asn Ile Leu Trp
1               5                   10                  15
Ile Met Phe Ala Ala Ser Gln Ala Phe Lys Ile Glu Thr Thr Pro Glu
            20                  25                  30
Ser Arg Tyr Leu Ala Gln Ile Gly Asp Ser Val Ser Leu Thr Cys Ser
        35                  40                  45
Thr Thr Gly Cys Glu Ser Pro Phe Phe Ser Trp Arg Thr Gln Ile Asp
    50                  55                  60
Ser Pro Leu Asn Gly Lys Val Thr Asn Glu Gly Thr Thr Ser Thr Leu
65                  70                  75                  80
Thr Met Asn Pro Val Ser Phe Gly Asn Glu His Ser Tyr Leu Cys Thr
                85                  90                  95
```

```
Ala Thr Cys Glu Ser Arg Lys Leu Glu Lys Gly Ile Gln Val Glu Ile
                100                 105                 110
Tyr Ser Phe Pro Lys Asp Pro Glu Ile His Leu Ser Gly Pro Leu Glu
            115                 120                 125
Ala Gly Lys Pro Ile Thr Val Lys Cys Ser Val Ala Asp Val Tyr Pro
    130                 135                 140
Phe Asp Arg Leu Glu Ile Asp Leu Leu Lys Gly Asp His Leu Met Lys
145                 150                 155                 160
Ser Gln Glu Phe Leu Glu Asp Ala Asp Arg Lys Ser Leu Glu Thr Lys
                165                 170                 175
Ser Leu Glu Val Thr Phe Thr Pro Val Ile Glu Asp Ile Gly Lys Val
            180                 185                 190
Leu Val Cys Arg Ala Lys Leu His Ile Asp Glu Met Asp Ser Val Pro
        195                 200                 205
Thr Val Arg Gln Ala Val Lys Glu Leu Gln Val Tyr Ile Ser Pro Lys
    210                 215                 220
Asn Thr Val Ile Ser Val Asn Pro Ser Thr Lys Leu Gln Glu Gly Gly
225                 230                 235                 240
Ser Val Thr Met Thr Cys Ser Ser Glu Gly Leu Pro Ala Pro Glu Ile
                245                 250                 255
Phe Trp Ser Lys Lys Leu Asp Asn Gly Asn Leu Gln His Leu Ser Gly
            260                 265                 270
Asn Ala Thr Leu Thr Leu Ile Ala Met Arg Met Glu Asp Ser Gly Ile
        275                 280                 285
Tyr Val Cys Glu Gly Val Asn Leu Ile Gly Lys Asn Arg Lys Glu Val
    290                 295                 300
Glu Leu Ile Val Gln Glu Lys Pro Phe Thr Val Glu Ile Ser Pro Gly
305                 310                 315                 320
Pro Arg Ile Ala Ala Gln Ile Gly Asp Ser Val Met Leu Thr Cys Ser
                325                 330                 335
Val Met Gly Cys Glu Ser Pro Ser Phe Ser Trp Arg Thr Gln Ile Asp
            340                 345                 350
Ser Pro Leu Ser Gly Lys Val Arg Ser Glu Gly Thr Asn Ser Thr Leu
        355                 360                 365
Thr Leu Ser Pro Val Ser Phe Glu Asn Glu His Ser Tyr Leu Cys Thr
    370                 375                 380
Val Thr Cys Gly His Lys Lys Leu Glu Lys Gly Ile Gln Val Glu Leu
385                 390                 395                 400
Tyr Ser Phe Pro Arg Asp Pro Glu Ile Glu Met Ser Gly Gly Leu Val
                405                 410                 415
Asn Gly Ser Ser Val Thr Val Ser Cys Lys Val Pro Ser Val Tyr Pro
            420                 425                 430
Leu Asp Arg Leu Glu Ile Glu Leu Leu Lys Gly Glu Thr Ile Leu Glu
        435                 440                 445
Asn Ile Glu Phe Leu Glu Asp Thr Asp Met Lys Ser Leu Glu Asn Lys
    450                 455                 460
Ser Leu Glu Met Thr Phe Ile Pro Thr Ile Glu Asp Thr Gly Lys Ala
465                 470                 475                 480
Leu Val Cys Gln Ala Lys Leu His Ile Asp Asp Met Glu Phe Glu Pro
                485                 490                 495
Lys Gln Arg Gln Ser Thr Gln Thr Leu Tyr Val Asn Val Ala Pro Arg
            500                 505                 510
Asp Thr Thr Val Leu Val Ser Pro Ser Ser Ile Leu Glu Glu Gly Ser
        515                 520                 525
Ser Val Asn Met Thr Cys Leu Ser Gln Gly Phe Pro Ala Pro Lys Ile
    530                 535                 540
Leu Trp Ser Arg Gln Leu Pro Asn Gly Glu Leu Gln Pro Leu Ser Glu
545                 550                 555                 560
Asn Ala Thr Leu Thr Leu Ile Ser Thr Lys Met Glu Asp Ser Gly Val
                565                 570                 575
Tyr Leu Cys Glu Gly Ile Asn Gln Ala Gly Arg Ser Arg Lys Glu Val
            580                 585                 590
Glu Leu Ile Ile Gln Val Thr Pro Lys Asp Ile Lys Leu Thr Ala Phe
        595                 600                 605
Pro Ser Glu Ser Val Lys Glu Gly Asp Thr Val Ile Ile Ser Cys Thr
    610                 615                 620
Cys Gly Asn Val Pro Glu Thr Trp Ile Ile Leu Lys Lys Lys Ala Glu
625                 630                 635                 640
Thr Gly Asp Thr Val Leu Lys Ser Ile Asp Gly Ala Tyr Thr Ile Arg
```

645 650 655
Lys Ala Gln Leu Lys Asp Ala Gly Val Tyr Glu Cys Glu Ser Lys Asn
660 665 670
Lys Val Gly Ser Gln Leu Arg Ser Leu Thr Leu Asp Val Gln Gly Arg
675 680 685
Glu Asn Asn Lys Asp Tyr Phe Ser Pro Glu Leu Leu Val Leu Tyr Phe
690 695 700
Ala Ser Ser Leu Ile Ile Pro Ala Ile Gly Met Ile Ile Tyr Phe Ala
705 710 715 720
Arg Lys Ala Asn Met Lys Gly Ser Tyr Ser Leu Val Glu Ala Gln Lys
725 730 735
Ser Lys Val

<210> 497
<211> 441
<212> PRT
<213> Homo sapiens
<400> 497
Met Ala Glu Pro Arg Gln Glu Phe Glu Val Met Glu Asp His Ala Gly
1 5 10 15
Thr Tyr Gly Leu Gly Asp Arg Lys Asp Gln Gly Gly Tyr Thr Met His
20 25 30
Gln Asp Gln Glu Gly Asp Thr Asp Ala Gly Leu Lys Glu Ser Pro Leu
35 40 45
Gln Thr Pro Thr Glu Asp Gly Ser Glu Glu Pro Gly Ser Glu Thr Ser
50 55 60
Asp Ala Lys Ser Thr Pro Thr Ala Glu Asp Val Thr Ala Pro Leu Val
65 70 75 80
Asp Glu Gly Ala Pro Gly Lys Gln Ala Ala Ala Gln Pro His Thr Glu
85 90 95
Ile Pro Glu Gly Thr Thr Ala Glu Glu Ala Gly Ile Gly Asp Thr Pro
100 105 110
Ser Leu Glu Asp Glu Ala Ala Gly His Val Thr Gln Ala Arg Met Val
115 120 125
Ser Lys Ser Lys Asp Gly Thr Gly Ser Asp Asp Lys Lys Ala Lys Gly
130 135 140
Ala Asp Gly Lys Thr Lys Ile Ala Thr Pro Arg Gly Ala Ala Pro Pro
145 150 155 160
Gly Gln Lys Gly Gln Ala Asn Ala Thr Arg Ile Pro Ala Lys Thr Pro
165 170 175
Pro Ala Pro Lys Thr Pro Pro Ser Ser Gly Glu Pro Pro Lys Ser Gly
180 185 190
Asp Arg Ser Gly Tyr Ser Ser Pro Gly Ser Pro Gly Thr Pro Gly Ser
195 200 205
Arg Ser Arg Thr Pro Ser Leu Pro Thr Pro Pro Thr Arg Glu Pro Lys
210 215 220
Lys Val Ala Val Val Arg Thr Pro Pro Lys Ser Pro Ser Ser Ala Lys
225 230 235 240
Ser Arg Leu Gln Thr Ala Pro Val Pro Met Pro Asp Leu Lys Asn Val
245 250 255
Lys Ser Lys Ile Gly Ser Thr Glu Asn Leu Lys His Gln Pro Gly Gly
260 265 270
Gly Lys Val Gln Ile Ile Asn Lys Lys Leu Asp Leu Ser Asn Val Gln
275 280 285
Ser Lys Cys Gly Ser Lys Asp Asn Ile Lys His Val Pro Gly Gly Gly
290 295 300
Ser Val Gln Ile Val Tyr Lys Pro Val Asp Leu Ser Lys Val Thr Ser
305 310 315 320
Lys Cys Gly Ser Leu Gly Asn Ile His His Lys Pro Gly Gly Gly Gln
325 330 335
Val Glu Val Lys Ser Glu Lys Leu Asp Phe Lys Asp Arg Val Gln Ser
340 345 350
Lys Ile Gly Ser Leu Asp Asn Ile Thr His Val Pro Gly Gly Gly Asn
355 360 365
Lys Lys Ile Glu Thr His Lys Leu Thr Phe Arg Glu Asn Ala Lys Ala
370 375 380
Lys Thr Asp His Gly Ala Glu Ile Val Tyr Lys Ser Pro Val Val Ser
385 390 395 400

Gly Asp Thr Ser Pro Arg His Leu Ser Asn Val Ser Ser Thr Gly Ser
405 410 415
Ile Asp Met Val Asp Ser Pro Gln Leu Ala Thr Leu Ala Asp Glu Val
420 425 430
Ser Ala Ser Leu Ala Lys Gln Gly Leu
435 440

<210> 498
<211> 476
<212> PRT
<213> Homo sapiens
<400> 498
Met Met Thr Ala Lys Ala Val Asp Lys Ile Pro Val Thr Leu Ser Gly
1 5 10 15
Phe Val His Gln Leu Ser Asp Asn Ile Tyr Pro Val Glu Asp Leu Ala
20 25 30
Ala Thr Ser Val Thr Ile Phe Pro Asn Ala Glu Leu Gly Gly Pro Phe
35 40 45
Asp Gln Met Asn Gly Val Ala Gly Asp Gly Met Ile Asn Ile Asp Met
50 55 60
Thr Gly Glu Lys Arg Ser Leu Asp Leu Pro Tyr Pro Ser Ser Phe Ala
65 70 75 80
Pro Val Ser Ala Pro Arg Asn Gln Thr Phe Thr Tyr Met Gly Lys Phe
85 90 95
Ser Ile Asp Pro Gln Tyr Pro Gly Ala Ser Cys Tyr Pro Glu Gly Ile
100 105 110
Ile Asn Ile Val Ser Ala Gly Ile Leu Gln Gly Val Thr Ser Pro Ala
115 120 125
Ser Thr Thr Ala Ser Ser Ser Val Thr Ser Ala Ser Pro Asn Pro Leu
130 135 140
Ala Thr Gly Pro Leu Gly Val Cys Thr Met Ser Gln Thr Gln Pro Asp
145 150 155 160
Leu Asp His Leu Tyr Ser Pro Pro Pro Pro Pro Pro Pro Tyr Ser Gly
165 170 175
Cys Ala Gly Asp Leu Tyr Gln Asp Pro Ser Ala Phe Leu Ser Ala Ala
180 185 190
Thr Thr Ser Thr Ser Ser Ser Leu Ala Tyr Pro Pro Pro Pro Ser Tyr
195 200 205
Pro Ser Pro Lys Pro Ala Thr Asp Pro Gly Leu Phe Pro Met Ile Pro
210 215 220
Asp Tyr Pro Gly Phe Phe Pro Ser Gln Cys Gln Arg Asp Leu His Gly
225 230 235 240
Thr Ala Gly Pro Asp Arg Lys Pro Phe Pro Cys Pro Leu Asp Thr Leu
245 250 255
Arg Val Pro Pro Pro Leu Thr Pro Leu Ser Thr Ile Arg Asn Phe Thr
260 265 270
Leu Gly Gly Pro Ser Ala Gly Val Thr Gly Pro Gly Ala Ser Gly Gly
275 280 285
Ser Glu Gly Pro Arg Leu Pro Gly Ser Ser Ser Ala Ala Ala Ala Ala
290 295 300
Ala Ala Ala Ala Ala Tyr Asn Pro His His Leu Pro Leu Arg Pro Ile
305 310 315 320
Leu Arg Pro Arg Lys Tyr Pro Asn Arg Pro Ser Lys Thr Pro Val His
325 330 335
Glu Arg Pro Tyr Pro Cys Pro Ala Glu Gly Cys Asp Arg Arg Phe Ser
340 345 350
Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly His Lys
355 360 365
Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
370 375 380
Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
385 390 395 400
Asp Tyr Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His
405 410 415
Thr Lys Ile His Leu Arg Gln Lys Glu Arg Lys Ser Ser Ala Pro Ser
420 425 430
Ala Ser Val Pro Ala Pro Ser Thr Ala Ser Cys Ser Gly Gly Val Gln
435 440 445
Pro Gly Gly Thr Leu Cys Ser Ser Asn Ser Ser Ser Leu Gly Gly Gly

450 455 460
Pro Leu Ala Pro Cys Ser Ser Arg Thr Arg Thr Pro
465 470 475

<210> 499
<211> 406
<212> PRT
<213> Homo sapiens
<400> 499
Met Ser Gly Cys Pro Phe Leu Gly Asn Asn Phe Gly Tyr Thr Phe Lys
1 5 10 15
Lys Leu Pro Val Glu Gly Ser Glu Glu Asp Lys Ser Gln Thr Gly Val
20 25 30
Asn Arg Ala Ser Lys Gly Gly Leu Ile Tyr Gly Asn Tyr Leu His Leu
35 40 45
Glu Lys Val Leu Asn Ala Gln Glu Leu Gln Ser Glu Thr Lys Gly Asn
50 55 60
Lys Ile His Asp Glu His Leu Phe Ile Ile Thr His Gln Ala Tyr Glu
65 70 75 80
Leu Trp Phe Lys Gln Ile Leu Trp Glu Leu Asp Ser Val Arg Glu Ile
85 90 95
Phe Gln Asn Gly His Val Arg Asp Glu Arg Asn Met Leu Lys Val Val
100 105 110
Ser Arg Met His Arg Val Ser Val Ile Leu Lys Leu Leu Val Gln Gln
115 120 125
Phe Ser Ile Leu Glu Thr Met Thr Ala Leu Asp Phe Asn Asp Phe Arg
130 135 140
Glu Tyr Leu Ser Pro Ala Ser Gly Phe Gln Ser Leu Gln Phe Arg Leu
145 150 155 160
Leu Glu Asn Lys Ile Gly Val Leu Gln Asn Met Arg Val Pro Tyr Asn
165 170 175
Arg Arg His Tyr Arg Asp Asn Phe Lys Gly Glu Glu Asn Glu Leu Leu
180 185 190
Leu Lys Ser Glu Gln Glu Lys Thr Leu Leu Glu Leu Val Glu Ala Trp
195 200 205
Leu Glu Arg Thr Pro Gly Leu Glu Pro His Gly Phe Asn Phe Trp Gly
210 215 220
Lys Leu Glu Lys Asn Ile Thr Arg Gly Leu Glu Glu Glu Phe Ile Arg
225 230 235 240
Ile Gln Ala Lys Glu Glu Ser Glu Glu Lys Glu Glu Gln Val Ala Glu
245 250 255
Phe Gln Lys Gln Lys Glu Val Leu Leu Ser Leu Phe Asp Glu Lys Arg
260 265 270
His Glu His Leu Leu Ser Lys Gly Glu Arg Arg Leu Ser Tyr Arg Ala
275 280 285
Leu Gln Gly Ala Leu Met Ile Tyr Phe Tyr Arg Glu Glu Pro Arg Phe
290 295 300
Gln Val Pro Phe Gln Leu Leu Thr Ser Leu Met Asp Ile Asp Ser Leu
305 310 315 320
Met Thr Lys Trp Arg Tyr Asn His Val Cys Met Val His Arg Met Leu
325 330 335
Gly Ser Lys Ala Gly Thr Gly Gly Ser Ser Gly Tyr His Tyr Leu Arg
340 345 350
Ser Thr Val Ser Asp Arg Tyr Lys Val Phe Val Asp Leu Phe Asn Leu
355 360 365
Ser Thr Tyr Leu Ile Pro Arg His Trp Ile Pro Lys Met Asn Pro Thr
370 375 380
Ile His Lys Phe Leu Tyr Thr Ala Glu Tyr Cys Asp Ser Ser Tyr Phe
385 390 395 400
Ser Ser Asp Glu Ser Asp
405

<210> 500
<211> 470
<212> PRT
<213> Homo sapiens
<400> 500
Met Leu Arg Gly Ile Ser Gln Leu Pro Ala Val Ala Thr Met Ser Trp
1 5 10 15

Val Leu Leu Pro Val Leu Trp Leu Ile Val Gln Thr Gln Ala Ile Ala
20 25 30
Ile Lys Gln Thr Pro Glu Leu Thr Leu His Glu Ile Val Cys Pro Lys
35 40 45
Lys Leu His Ile Leu His Lys Arg Glu Ile Lys Asn Asn Gln Thr Glu
50 55 60
Lys His Gly Lys Glu Glu Arg Tyr Glu Pro Glu Val Gln Tyr Gln Met
65 70 75 80
Ile Leu Asn Gly Glu Glu Ile Ile Leu Ser Leu Gln Lys Thr Lys His
85 90 95
Leu Leu Gly Pro Asp Tyr Thr Glu Thr Leu Tyr Ser Pro Arg Gly Glu
100 105 110
Glu Ile Thr Thr Lys Pro Glu Asn Met Glu His Cys Tyr Tyr Lys Gly
115 120 125
Asn Ile Leu Asn Glu Lys Asn Ser Val Ala Ser Ile Ser Thr Cys Asp
130 135 140
Gly Leu Arg Gly Tyr Phe Thr His His His Gln Arg Tyr Gln Ile Lys
145 150 155 160
Pro Leu Lys Ser Thr Asp Glu Lys Glu His Ala Val Phe Thr Ser Asn
165 170 175
Gln Glu Glu Gln Asp Pro Ala Asn His Thr Cys Gly Val Lys Ser Thr
180 185 190
Asp Gly Lys Gln Gly Pro Ile Arg Ile Ser Arg Ser Leu Lys Ser Pro
195 200 205
Glu Lys Glu Asp Phe Leu Arg Ala Gln Lys Tyr Ile Asp Leu Tyr Leu
210 215 220
Val Leu Asp Asn Ala Phe Tyr Lys Asn Tyr Asn Glu Asn Leu Thr Leu
225 230 235 240
Ile Arg Ser Phe Val Phe Asp Val Met Asn Leu Leu Asn Val Ile Tyr
245 250 255
Asn Thr Ile Asp Val Gln Val Ala Leu Val Gly Met Glu Ile Trp Ser
260 265 270
Asp Gly Asp Lys Ile Lys Val Val Pro Ser Ala Ser Thr Thr Phe Asp
275 280 285
Asn Phe Leu Arg Trp His Ser Ser Asn Leu Gly Lys Lys Ile His Asp
290 295 300
His Ala Gln Leu Leu Ser Gly Ile Ser Phe Asn Asn Arg Arg Val Gly
305 310 315 320
Leu Ala Ala Ser Asn Ser Leu Cys Ser Pro Ser Ser Val Ala Val Ile
325 330 335
Glu Ala Lys Lys Lys Asn Asn Val Ala Leu Val Gly Val Met Ser His
340 345 350
Glu Leu Gly His Val Leu Gly Met Pro Asp Val Pro Phe Asn Thr Lys
355 360 365
Cys Pro Ser Gly Ser Cys Val Met Asn Gln Tyr Leu Ser Ser Lys Phe
370 375 380
Pro Lys Asp Phe Ser Thr Ser Cys Arg Ala His Phe Glu Arg Tyr Leu
385 390 395 400
Leu Ser Gln Lys Pro Lys Cys Leu Leu Gln Ala Pro Ile Pro Thr Asn
405 410 415
Ile Met Thr Thr Pro Val Cys Gly Asn His Leu Leu Glu Val Gly Glu
420 425 430
Asp Cys Asp Cys Gly Ser Pro Lys Glu Cys Thr Asn Leu Cys Cys Glu
435 440 445
Ala Leu Thr Cys Lys Leu Lys Pro Gly Thr Asp Cys Gly Gly Asp Ala
450 455 460
Pro Asn His Thr Thr Glu
465 470

<210> 501
<211> 347
<212> PRT
<213> Homo sapiens
<400> 501
Met Thr Leu Asp His Gln Ile Ile Asn Pro Thr Leu Lys Trp Ser Gln
1 5 10 15
Pro Ala Val Pro Ser Gly Gly Pro Leu Val Gln His Ala His Thr Thr
20 25 30
Leu Asp Ser Asp Ala Gly Leu Thr Glu Asn Pro Leu Thr Lys Leu Leu

```
          35                  40                  45
Ala Ile Gly Lys Glu Asp Asp Asn Ala Gln Trp His Met Glu Asp Val
      50                  55                  60
Ile Glu Asp Ile Ile Gly Met Glu Ser Ser Phe Lys Glu Glu Gly Ala
65                  70                  75                  80
Asp Ser Pro Leu Leu Met Gln Arg Thr Leu Ser Gly Ser Ile Leu Asp
                85                  90                  95
Val Tyr Ser Gly Glu Gln Gly Ile Ser Pro Ile Asn Met Gly Leu Thr
            100                 105                 110
Ser Ala Ser Cys Pro Ser Ser Leu Pro Met Lys Arg Glu Ile Thr Glu
        115                 120                 125
Thr Asp Thr Arg Ala Leu Ala Lys Glu Arg Gln Lys Lys Asp Asn His
    130                 135                 140
Asn Leu Ile Glu Arg Arg Arg Arg Tyr Asn Ile Asn Tyr Arg Ile Lys
145                 150                 155                 160
Glu Leu Gly Thr Leu Ile Pro Lys Ser Asn Asp Pro Asp Met Arg Trp
                165                 170                 175
Asn Lys Gly Thr Ile Leu Lys Ala Ser Val Glu Tyr Ile Lys Trp Leu
            180                 185                 190
Gln Lys Glu Gln Gln Arg Ala Arg Glu Leu Glu His Arg Gln Lys Lys
        195                 200                 205
Leu Glu Gln Ala Asn Arg Arg Leu Leu Leu Arg Ile Gln Glu Leu Glu
    210                 215                 220
Ile Gln Ala Arg Thr His Gly Leu Pro Thr Leu Ala Ser Leu Gly Thr
225                 230                 235                 240
Val Asp Leu Gly Ala His Val Thr Lys Gln Gln Ser His Pro Glu Gln
                245                 250                 255
Asn Ser Val Asp Tyr Cys Gln Gln Leu Thr Val Ser Gln Gly Pro Ser
            260                 265                 270
Pro Glu Leu Cys Asp Gln Ala Ile Ala Phe Ser Asp Pro Leu Ser Tyr
        275                 280                 285
Phe Thr Asp Leu Ser Phe Ser Ala Ala Leu Lys Glu Glu Gln Arg Leu
    290                 295                 300
Asp Gly Met Leu Leu Asp Asp Thr Ile Ser Pro Phe Gly Thr Asp Pro
305                 310                 315                 320
Leu Leu Ser Ala Thr Ser Pro Ala Val Ser Lys Glu Ser Ser Arg Arg
                325                 330                 335
Ser Ser Phe Ser Ser Asp Asp Gly Asp Glu Leu
            340                 345
```

<210> 502
<211> 162
<212> PRT
<213> Homo sapiens
<400> 502

```
Met Lys Glu Thr Ile Met Asn Gln Glu Lys Leu Ala Lys Leu Gln Ala
1               5                   10                  15
Gln Val Arg Ile Gly Gly Lys Gly Thr Ala Arg Arg Lys Lys Lys Val
            20                  25                  30
Val His Arg Thr Ala Thr Ala Asp Asp Lys Lys Leu Gln Phe Ser Leu
        35                  40                  45
Lys Lys Leu Gly Val Asn Asn Ile Ser Gly Ile Glu Glu Val Asn Met
    50                  55                  60
Phe Thr Asn Gln Gly Thr Val Ile His Phe Asn Asn Pro Lys Val Gln
65                  70                  75                  80
Ala Ser Leu Ala Ala Asn Thr Phe Thr Ile Thr Gly His Ala Glu Thr
                85                  90                  95
Lys Gln Leu Thr Glu Met Leu Pro Ser Ile Leu Asn Gln Leu Gly Ala
            100                 105                 110
Asp Ser Leu Thr Ser Leu Arg Arg Leu Ala Glu Ala Leu Pro Lys Gln
        115                 120                 125
Ser Val Asp Gly Lys Ala Pro Leu Ala Thr Gly Glu Asp Asp Asp Asp
    130                 135                 140
Glu Val Pro Asp Leu Val Glu Asn Phe Asp Glu Ala Ser Lys Asn Glu
145                 150                 155                 160
Ala Asn
```

<210> 503

<211> 2602
<212> PRT
<213> Homo sapiens
<400> 503

```
Met Pro Val Thr Glu Lys Asp Leu Ala Glu Asp Ala Pro Trp Lys Lys
1               5                  10                  15
Ile Gln Gln Asn Thr Phe Thr Arg Trp Cys Asn Glu His Leu Lys Cys
            20                  25                  30
Val Asn Lys Arg Ile Gly Asn Leu Gln Thr Asp Leu Ser Asp Gly Leu
        35                  40                  45
Arg Leu Ile Ala Leu Leu Glu Val Leu Ser Gln Lys Arg Met Tyr Arg
    50                  55                  60
Lys Tyr His Gln Arg Pro Thr Phe Arg Gln Met Gln Leu Glu Asn Val
65                  70                  75                  80
Ser Val Ala Leu Glu Phe Leu Asp Arg Glu Ser Ile Lys Leu Val Ser
                85                  90                  95
Ile Asp Ser Lys Ala Ile Val Asp Gly Asn Leu Lys Leu Ile Leu Gly
            100                 105                 110
Leu Val Trp Thr Leu Ile Leu His Tyr Ser Ile Ser Met Pro Val Trp
        115                 120                 125
Glu Asp Glu Gly Asp Asp Asp Ala Lys Lys Gln Thr Pro Lys Gln Arg
    130                 135                 140
Leu Leu Gly Trp Ile Gln Asn Lys Ile Pro Tyr Leu Pro Ile Thr Asn
145                 150                 155                 160
Phe Asn Gln Asn Trp Gln Asp Gly Lys Ala Leu Gly Ala Leu Val Asp
                165                 170                 175
Ser Cys Ala Pro Gly Leu Cys Pro Asp Trp Glu Ser Trp Asp Pro Gln
            180                 185                 190
Lys Pro Val Asp Asn Ala Arg Glu Ala Met Gln Gln Ala Asp Asp Trp
        195                 200                 205
Leu Gly Val Pro Gln Val Ile Thr Pro Glu Glu Ile Ile His Pro Asp
    210                 215                 220
Val Asp Glu His Ser Val Met Thr Tyr Leu Ser Gln Phe Pro Lys Ala
225                 230                 235                 240
Lys Leu Lys Pro Gly Ala Pro Leu Lys Pro Lys Leu Asn Pro Lys Lys
                245                 250                 255
Ala Arg Ala Tyr Gly Arg Gly Ile Glu Pro Thr Gly Asn Met Val Lys
            260                 265                 270
Gln Pro Ala Lys Phe Thr Val Asp Thr Ile Ser Ala Gly Gln Gly Asp
        275                 280                 285
Val Met Val Phe Val Glu Asp Pro Glu Gly Asn Lys Glu Glu Ala Gln
    290                 295                 300
Val Thr Pro Asp Ser Asp Lys Asn Lys Thr Tyr Ser Val Glu Tyr Leu
305                 310                 315                 320
Pro Lys Val Thr Gly Leu His Lys Val Thr Val Leu Phe Ala Gly Gln
                325                 330                 335
His Ile Ser Lys Ser Pro Phe Glu Val Ser Val Asp Lys Ala Gln Gly
            340                 345                 350
Asp Ala Ser Lys Val Thr Ala Lys Gly Pro Gly Leu Glu Ala Val Gly
        355                 360                 365
Asn Ile Ala Asn Lys Pro Thr Tyr Phe Asp Ile Tyr Thr Ala Gly Ala
    370                 375                 380
Gly Val Gly Asp Ile Gly Val Glu Val Glu Asp Pro Gln Gly Lys Asn
385                 390                 395                 400
Thr Val Glu Leu Leu Val Glu Asp Lys Gly Asn Gln Val Tyr Arg Cys
                405                 410                 415
Val Tyr Lys Pro Met Gln Pro Gly Pro His Val Val Lys Ile Phe Phe
            420                 425                 430
Ala Gly Asp Thr Ile Pro Lys Ser Pro Phe Val Val Gln Val Gly Glu
        435                 440                 445
Ala Cys Asn Pro Asn Ala Cys Arg Ala Ser Gly Arg Gly Leu Gln Pro
    450                 455                 460
Lys Gly Val Arg Ile Arg Glu Thr Thr Asp Phe Lys Val Asp Thr Lys
465                 470                 475                 480
Ala Ala Gly Ser Gly Glu Leu Gly Val Thr Met Lys Gly Pro Lys Gly
                485                 490                 495
Leu Glu Glu Leu Val Lys Gln Lys Asp Phe Leu Asp Gly Val Tyr Ala
            500                 505                 510
Phe Glu Tyr Tyr Pro Ser Thr Pro Gly Arg Tyr Ser Ile Ala Ile Thr
```

```
        515                 520                 525
Trp Gly Gly His His Ile Pro Lys Ser Pro Phe Glu Val Gln Val Gly
    530                 535                 540
Pro Glu Ala Gly Met Gln Lys Val Arg Ala Trp Gly Pro Gly Leu His
545                 550                 555                 560
Gly Gly Ile Val Gly Arg Ser Ala Asp Phe Val Val Glu Ser Ile Gly
                565                 570                 575
Ser Glu Val Gly Ser Leu Gly Phe Ala Ile Glu Gly Pro Ser Gln Ala
            580                 585                 590
Lys Ile Glu Tyr Asn Asp Gln Asn Asp Gly Ser Cys Asp Val Lys Tyr
        595                 600                 605
Trp Pro Lys Glu Pro Gly Glu Tyr Ala Val His Ile Met Cys Asp Asp
    610                 615                 620
Glu Asp Ile Lys Asp Ser Pro Tyr Met Ala Phe Ile His Pro Ala Thr
625                 630                 635                 640
Gly Gly Tyr Asn Pro Asp Leu Val Arg Ala Tyr Gly Pro Gly Leu Glu
                645                 650                 655
Lys Ser Gly Cys Ile Val Asn Asn Leu Ala Glu Phe Thr Val Asp Pro
            660                 665                 670
Lys Asp Ala Gly Lys Ala Pro Leu Lys Ile Phe Ala Gln Asp Gly Glu
        675                 680                 685
Gly Gln Arg Ile Asp Ile Gln Met Lys Asn Arg Met Asp Gly Thr Tyr
    690                 695                 700
Ala Cys Ser Tyr Thr Pro Val Lys Ala Ile Lys His Thr Ile Ala Val
705                 710                 715                 720
Val Trp Gly Gly Val Asn Ile Pro His Ser Pro Tyr Arg Val Asn Ile
                725                 730                 735
Gly Gln Gly Ser His Pro Gln Lys Val Lys Val Phe Gly Pro Gly Val
            740                 745                 750
Glu Arg Ser Gly Leu Lys Ala Asn Glu Pro Thr His Phe Thr Val Asp
        755                 760                 765
Cys Thr Glu Ala Gly Glu Gly Asp Val Ser Val Gly Ile Lys Cys Asp
    770                 775                 780
Ala Arg Val Leu Ser Glu Asp Glu Glu Asp Val Asp Phe Asp Ile Ile
785                 790                 795                 800
His Asn Ala Asn Asp Thr Phe Thr Val Lys Tyr Val Pro Pro Ala Ala
                805                 810                 815
Gly Arg Tyr Thr Ile Lys Val Leu Phe Ala Ser Gln Glu Ile Pro Ala
            820                 825                 830
Ser Pro Phe Arg Val Lys Val Asp Pro Ser His Asp Ala Ser Lys Val
        835                 840                 845
Lys Ala Glu Gly Pro Gly Leu Ser Lys Ala Gly Val Glu Asn Gly Lys
    850                 855                 860
Pro Thr His Phe Thr Val Tyr Thr Lys Gly Ala Gly Lys Ala Pro Leu
865                 870                 875                 880
Asn Val Gln Phe Asn Ser Pro Leu Pro Gly Asp Ala Val Lys Asp Leu
                885                 890                 895
Asp Ile Ile Asp Asn Tyr Asp Tyr Ser His Thr Val Lys Tyr Thr Pro
            900                 905                 910
Thr Gln Gln Gly Asn Met Gln Val Leu Val Thr Tyr Gly Gly Asp Pro
        915                 920                 925
Ile Pro Lys Ser Pro Phe Thr Val Gly Val Ala Ala Pro Leu Asp Leu
    930                 935                 940
Ser Lys Ile Lys Leu Asn Gly Leu Glu Asn Arg Val Glu Val Gly Lys
945                 950                 955                 960
Asp Gln Glu Phe Thr Val Asp Thr Arg Gly Ala Gly Gly Gln Gly Lys
                965                 970                 975
Leu Asp Val Thr Ile Leu Ser Pro Ser Arg Lys Val Val Pro Cys Leu
            980                 985                 990
Val Thr Pro Val Thr Gly Arg Glu  Asn Ser Thr Ala Lys  Phe Ile Pro
        995                 1000                1005
Arg Glu  Glu Gly Leu Tyr Ala  Val Asp Val Thr Tyr  Asp Gly His
    1010                1015                1020
Pro Val  Pro Gly Ser Pro Tyr  Thr Val Glu Ala Ser  Leu Pro Pro
    1025                1030                1035
Asp Pro  Ser Lys Val Lys Ala  His Gly Pro Gly Leu  Glu Gly Gly
    1040                1045                1050
Leu Val  Gly Lys Pro Ala Glu  Phe Thr Ile Asp Thr  Lys Gly Ala
    1055                1060                1065
```

Gly Thr Gly Gly Leu Gly Leu Thr Val Glu Gly Pro Cys Glu Ala
1070 1075 1080
Lys Ile Glu Cys Ser Asp Asn Gly Asp Gly Thr Cys Ser Val Ser
1085 1090 1095
Tyr Leu Pro Thr Lys Pro Gly Glu Tyr Phe Val Asn Ile Leu Phe
1100 1105 1110
Glu Glu Val His Ile Pro Gly Ser Pro Phe Lys Ala Asp Ile Glu
1115 1120 1125
Met Pro Phe Asp Pro Ser Lys Val Val Ala Ser Gly Pro Gly Leu
1130 1135 1140
Glu His Gly Lys Val Gly Glu Ala Gly Leu Leu Ser Val Asn Cys
1145 1150 1155
Ser Glu Ala Gly Pro Gly Ala Leu Gly Leu Glu Ala Val Ser Asp
1160 1165 1170
Ser Gly Thr Lys Ala Glu Val Ser Ile Gln Asn Asn Lys Asp Gly
1175 1180 1185
Thr Tyr Ala Val Thr Tyr Val Pro Leu Thr Ala Gly Met Tyr Thr
1190 1195 1200
Leu Thr Met Lys Tyr Gly Gly Glu Leu Val Pro His Phe Pro Ala
1205 1210 1215
Arg Val Lys Val Glu Pro Ala Val Asp Thr Ser Arg Ile Lys Val
1220 1225 1230
Phe Gly Pro Gly Ile Glu Gly Lys Asp Val Phe Arg Glu Ala Thr
1235 1240 1245
Thr Asp Phe Thr Val Asp Ser Arg Pro Leu Thr Gln Val Gly Gly
1250 1255 1260
Asp His Ile Lys Ala His Ile Ala Asn Pro Ser Gly Ala Ser Thr
1265 1270 1275
Glu Cys Phe Val Thr Asp Asn Ala Asp Gly Thr Tyr Gln Val Glu
1280 1285 1290
Tyr Thr Pro Phe Glu Lys Gly Leu His Val Val Glu Val Thr Tyr
1295 1300 1305
Asp Asp Val Pro Ile Pro Asn Ser Pro Phe Lys Val Ala Val Thr
1310 1315 1320
Glu Gly Cys Gln Pro Ser Arg Val Gln Ala Gln Gly Pro Gly Leu
1325 1330 1335
Lys Glu Ala Phe Thr Asn Lys Pro Asn Val Phe Thr Val Val Thr
1340 1345 1350
Arg Gly Ala Gly Ile Gly Gly Leu Gly Ile Thr Val Glu Gly Pro
1355 1360 1365
Ser Glu Ser Lys Ile Asn Cys Arg Asp Asn Lys Asp Gly Ser Cys
1370 1375 1380
Ser Ala Glu Tyr Ile Pro Phe Ala Pro Gly Asp Tyr Asp Val Asn
1385 1390 1395
Ile Thr Tyr Gly Gly Ala His Ile Pro Gly Ser Pro Phe Arg Val
1400 1405 1410
Pro Val Lys Asp Val Val Asp Pro Ser Lys Val Lys Ile Ala Gly
1415 1420 1425
Pro Gly Leu Gly Ser Gly Val Arg Ala Arg Val Leu Gln Ser Phe
1430 1435 1440
Thr Val Asp Ser Ser Lys Ala Gly Leu Ala Pro Leu Glu Val Arg
1445 1450 1455
Val Leu Gly Pro Arg Gly Leu Val Glu Pro Val Asn Met Val Asp
1460 1465 1470
Asn Gly Asp Gly Thr His Thr Val Thr Tyr Thr Pro Ser Gln Glu
1475 1480 1485
Gly Pro Tyr Met Val Ser Val Lys Tyr Ala Asp Glu Glu Ile Pro
1490 1495 1500
Arg Ser Pro Phe Lys Val Lys Val Leu Pro Thr Tyr Asp Ala Ser
1505 1510 1515
Lys Val Thr Ala Ser Gly Pro Gly Leu Ser Ser Tyr Gly Val Pro
1520 1525 1530
Ala Ser Leu Pro Val Asp Phe Ala Ile Asp Ala Arg Asp Ala Gly
1535 1540 1545
Glu Gly Leu Leu Ala Val Gln Ile Thr Asp Gln Glu Gly Lys Pro
1550 1555 1560
Lys Arg Ala Ile Val His Asp Asn Lys Asp Gly Thr Tyr Ala Val
1565 1570 1575
Thr Tyr Ile Pro Asp Lys Thr Gly Arg Tyr Met Ile Gly Val Thr

1580 1585 1590
Tyr Gly Gly Asp Asp Ile Pro Leu Ser Pro Tyr Arg Ile Arg Ala
1595 1600 1605
Thr Gln Thr Gly Asp Ala Ser Lys Cys Leu Ala Thr Gly Pro Gly
1610 1615 1620
Ile Ala Ser Thr Val Lys Thr Gly Glu Glu Val Gly Phe Val Val
1625 1630 1635
Asp Ala Lys Thr Ala Gly Lys Gly Lys Val Thr Cys Thr Val Leu
1640 1645 1650
Thr Pro Asp Gly Thr Glu Ala Glu Ala Asp Val Ile Glu Asn Glu
1655 1660 1665
Asp Gly Thr Tyr Asp Ile Phe Tyr Thr Ala Ala Lys Pro Gly Thr
1670 1675 1680
Tyr Val Ile Tyr Val Arg Phe Gly Gly Val Asp Ile Pro Asn Ser
1685 1690 1695
Pro Phe Thr Val Met Ala Thr Asp Gly Glu Val Thr Ala Val Glu
1700 1705 1710
Glu Ala Pro Val Asn Ala Cys Pro Pro Gly Phe Arg Pro Trp Val
1715 1720 1725
Thr Glu Glu Ala Tyr Val Pro Val Ser Asp Met Asn Gly Leu Gly
1730 1735 1740
Phe Lys Pro Phe Asp Leu Val Ile Pro Phe Ala Val Arg Lys Gly
1745 1750 1755
Glu Ile Thr Gly Glu Val His Met Pro Ser Gly Lys Thr Ala Thr
1760 1765 1770
Pro Glu Ile Val Asp Asn Lys Asp Gly Thr Val Thr Val Arg Tyr
1775 1780 1785
Ala Pro Thr Glu Val Gly Leu His Glu Met His Ile Lys Tyr Met
1790 1795 1800
Gly Ser His Ile Pro Glu Ser Pro Leu Gln Phe Tyr Val Asn Tyr
1805 1810 1815
Pro Asn Ser Gly Ser Val Ser Ala Tyr Gly Pro Gly Leu Val Tyr
1820 1825 1830
Gly Val Ala Asn Lys Thr Ala Thr Phe Thr Ile Val Thr Glu Asp
1835 1840 1845
Ala Gly Glu Gly Gly Leu Asp Leu Ala Ile Glu Gly Pro Ser Lys
1850 1855 1860
Ala Glu Ile Ser Cys Ile Asp Asn Lys Asp Gly Thr Cys Thr Val
1865 1870 1875
Thr Tyr Leu Pro Thr Leu Pro Gly Asp Tyr Ser Ile Leu Val Lys
1880 1885 1890
Tyr Asn Asp Lys His Ile Pro Gly Ser Pro Phe Thr Ala Lys Ile
1895 1900 1905
Thr Asp Asp Ser Arg Arg Cys Ser Gln Val Lys Leu Gly Ser Ala
1910 1915 1920
Ala Asp Phe Leu Leu Asp Ile Ser Glu Thr Asp Leu Ser Ser Leu
1925 1930 1935
Thr Ala Ser Ile Lys Ala Pro Ser Gly Arg Asp Glu Pro Cys Leu
1940 1945 1950
Leu Lys Arg Leu Pro Asn Asn His Ile Gly Ile Ser Phe Ile Pro
1955 1960 1965
Arg Glu Val Gly Glu His Leu Val Ser Ile Lys Lys Asn Gly Asn
1970 1975 1980
His Val Ala Asn Ser Pro Val Ser Ile Met Val Val Gln Ser Glu
1985 1990 1995
Ile Gly Asp Ala Arg Arg Ala Lys Val Tyr Gly Arg Gly Leu Ser
2000 2005 2010
Glu Gly Arg Thr Phe Glu Met Ser Asp Phe Ile Val Asp Thr Arg
2015 2020 2025
Asp Ala Gly Tyr Gly Gly Ile Ser Leu Ala Val Glu Gly Pro Ser
2030 2035 2040
Lys Val Asp Ile Gln Thr Glu Asp Leu Glu Asp Gly Thr Cys Lys
2045 2050 2055
Val Ser Tyr Phe Pro Thr Val Pro Gly Val Tyr Ile Val Ser Thr
2060 2065 2070
Lys Phe Ala Asp Glu His Val Pro Gly Ser Pro Phe Thr Val Lys
2075 2080 2085
Ile Ser Gly Glu Gly Arg Val Lys Glu Ser Ile Thr Arg Thr Ser
2090 2095 2100

Arg Ala Pro Ser Val Ala Thr Val Gly Ser Ile Cys Asp Leu Asn
2105 2110 2115
Leu Lys Ile Pro Glu Ile Asn Ser Ser Asp Met Ser Ala His Val
2120 2125 2130
Thr Ser Pro Ser Gly Arg Val Thr Glu Ala Glu Ile Val Pro Met
2135 2140 2145
Gly Lys Asn Ser His Cys Val Arg Phe Val Pro Gln Glu Met Gly
2150 2155 2160
Val His Thr Val Ser Val Lys Tyr Arg Gly Gln His Val Thr Gly
2165 2170 2175
Ser Pro Phe Gln Phe Thr Val Gly Pro Leu Gly Glu Gly Gly Ala
2180 2185 2190
His Lys Val Arg Ala Gly Gly Pro Gly Leu Glu Arg Gly Glu Ala
2195 2200 2205
Gly Val Pro Ala Glu Phe Ser Ile Trp Thr Arg Glu Ala Gly Ala
2210 2215 2220
Gly Gly Leu Ser Ile Ala Val Glu Gly Pro Ser Lys Ala Glu Ile
2225 2230 2235
Thr Phe Asp Asp His Lys Asn Gly Ser Cys Gly Val Ser Tyr Ile
2240 2245 2250
Ala Gln Glu Pro Gly Asn Tyr Glu Val Ser Ile Lys Phe Asn Asp
2255 2260 2265
Glu His Ile Pro Glu Ser Pro Tyr Leu Val Pro Val Ile Ala Pro
2270 2275 2280
Ser Asp Asp Ala Arg Arg Leu Thr Val Met Ser Leu Gln Glu Ser
2285 2290 2295
Gly Leu Lys Val Asn Gln Pro Ala Ser Phe Ala Ile Arg Leu Asn
2300 2305 2310
Gly Ala Lys Gly Lys Ile Asp Ala Lys Val His Ser Pro Ser Gly
2315 2320 2325
Ala Val Glu Glu Cys His Val Ser Glu Leu Glu Pro Asp Lys Tyr
2330 2335 2340
Ala Val Arg Phe Ile Pro His Glu Asn Gly Val His Thr Ile Asp
2345 2350 2355
Val Lys Phe Asn Gly Ser His Val Val Gly Ser Pro Phe Lys Val
2360 2365 2370
Arg Val Gly Glu Pro Gly Gln Ala Gly Asn Pro Ala Leu Val Ser
2375 2380 2385
Ala Tyr Gly Thr Gly Leu Glu Gly Gly Thr Thr Gly Ile Gln Ser
2390 2395 2400
Glu Phe Phe Ile Asn Thr Thr Arg Ala Gly Pro Gly Thr Leu Ser
2405 2410 2415
Val Thr Ile Glu Gly Pro Ser Lys Val Lys Met Asp Cys Gln Glu
2420 2425 2430
Thr Pro Glu Gly Tyr Lys Val Met Tyr Thr Pro Met Ala Pro Gly
2435 2440 2445
Asn Tyr Leu Ile Ser Val Lys Tyr Gly Gly Pro Asn His Ile Val
2450 2455 2460
Gly Ser Pro Phe Lys Ala Lys Val Thr Gly Gln Arg Leu Val Ser
2465 2470 2475
Pro Gly Ser Ala Asn Glu Thr Ser Ser Ile Leu Val Glu Ser Val
2480 2485 2490
Thr Arg Ser Ser Thr Glu Thr Cys Tyr Ser Ala Ile Pro Lys Ala
2495 2500 2505
Ser Ser Asp Ala Ser Lys Val Thr Ser Lys Gly Ala Gly Leu Ser
2510 2515 2520
Lys Ala Phe Val Gly Gln Lys Ser Ser Phe Leu Val Asp Cys Ser
2525 2530 2535
Lys Ala Gly Ser Asn Met Leu Leu Ile Gly Val His Gly Pro Thr
2540 2545 2550
Thr Pro Cys Glu Glu Val Ser Met Lys His Val Gly Asn Gln Gln
2555 2560 2565
Tyr Asn Val Thr Tyr Val Val Lys Glu Arg Gly Asp Tyr Val Leu
2570 2575 2580
Ala Val Lys Trp Gly Glu Glu His Ile Pro Gly Ser Pro Phe His
2585 2590 2595
Val Thr Val Pro
2600

<210> 504
<211> 760
<212> PRT
<213> Homo sapiens
<400> 504

```
Met Met Asp Gln Ala Arg Ser Ala Phe Ser Asn Leu Phe Gly Gly Glu
1               5                  10                  15
Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln Val Asp Gly Asp
            20                  25                  30
Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
        35                  40                  45
Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
    50                  55                  60
Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
65                  70                  75                  80
Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
                85                  90                  95
Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
            100                 105                 110
Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
        115                 120                 125
Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Ser Thr Ile
    130                 135                 140
Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
145                 150                 155                 160
Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
                165                 170                 175
Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
            180                 185                 190
Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg
        195                 200                 205
Leu Val Tyr Leu Val Glu Asn Pro Gly Gly Tyr Val Ala Tyr Ser Lys
    210                 215                 220
Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
225                 230                 235                 240
Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile
                245                 250                 255
Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
            260                 265                 270
Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe
        275                 280                 285
Pro Ile Val Asn Ala Glu Leu Ser Phe Phe Gly His Ala His Leu Gly
    290                 295                 300
Thr Gly Asp Pro Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln
305                 310                 315                 320
Phe Pro Pro Ser Arg Ser Ser Gly Leu Pro Asn Ile Pro Val Gln Thr
                325                 330                 335
Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp
            340                 345                 350
Cys Pro Ser Asp Trp Lys Thr Asp Ser Thr Cys Arg Met Val Thr Ser
        355                 360                 365
Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile
    370                 375                 380
Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
385                 390                 395                 400
His Tyr Val Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
                405                 410                 415
Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
            420                 425                 430
Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
        435                 440                 445
Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
    450                 455                 460
Glu Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr
465                 470                 475                 480
Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
                485                 490                 495
Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
            500                 505                 510
```

```
Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp
        515                 520                 525
Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe
    530                 535                 540
Leu Ala Tyr Ser Gly Ile Pro Ala Val Ser Phe Cys Phe Cys Glu Asp
545                 550                 555                 560
Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu
                565                 570                 575
Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Ala Glu
            580                 585                 590
Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn
        595                 600                 605
Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp
    610                 615                 620
Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
625                 630                 635                 640
Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
                645                 650                 655
Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
            660                 665                 670
Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
        675                 680                 685
Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
    690                 695                 700
Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
705                 710                 715                 720
Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
                725                 730                 735
Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp
            740                 745                 750
Val Trp Asp Ile Asp Asn Glu Phe
        755                 760
```

<210> 505
<211> 611
<212> PRT
<213> Homo sapiens
<400> 505

```
Met Ala Ala Ser Ala Lys Lys Lys Asn Lys Lys Gly Lys Thr Ile Ser
1               5                  10                  15
Leu Thr Asp Phe Leu Ala Glu Asp Gly Gly Thr Gly Gly Gly Ser Thr
            20                  25                  30
Tyr Val Ser Lys Pro Val Ser Trp Ala Asp Glu Thr Asp Asp Leu Glu
        35                  40                  45
Gly Asp Val Ser Thr Thr Trp His Ser Asn Asp Asp Asp Val Tyr Arg
    50                  55                  60
Ala Pro Pro Ile Asp Arg Ser Ile Leu Pro Thr Ala Pro Arg Ala Ala
65                  70                  75                  80
Arg Glu Pro Asn Ile Asp Arg Ser Arg Leu Pro Lys Ser Pro Pro Tyr
                85                  90                  95
Thr Ala Phe Leu Gly Asn Leu Pro Tyr Asp Val Thr Glu Glu Ser Ile
            100                 105                 110
Lys Glu Phe Phe Arg Gly Leu Asn Ile Ser Ala Val Arg Leu Pro Arg
        115                 120                 125
Glu Pro Ser Asn Pro Glu Arg Leu Lys Gly Phe Gly Tyr Ala Glu Phe
    130                 135                 140
Glu Asp Leu Asp Ser Leu Leu Ser Ala Leu Ser Leu Asn Glu Glu Ser
145                 150                 155                 160
Leu Gly Asn Arg Arg Ile Arg Val Asp Val Ala Asp Gln Ala Gln Asp
                165                 170                 175
Lys Asp Arg Asp Asp Arg Ser Phe Gly Arg Asp Arg Asn Arg Asp Ser
            180                 185                 190
Asp Lys Thr Asp Thr Asp Trp Arg Ala Arg Pro Ala Thr Asp Ser Phe
        195                 200                 205
Asp Asp Tyr Pro Pro Arg Arg Gly Asp Asp Ser Phe Gly Asp Lys Tyr
    210                 215                 220
Arg Asp Arg Tyr Asp Ser Asp Arg Tyr Arg Asp Gly Tyr Arg Asp Gly
225                 230                 235                 240
Tyr Arg Asp Gly Pro Arg Arg Asp Met Asp Arg Tyr Gly Gly Arg Asp
```

```
                245                 250                 255
Arg Tyr Asp Asp Arg Gly Ser Arg Asp Tyr Asp Arg Gly Tyr Asp Ser
            260                 265                 270
Arg Ile Gly Ser Gly Arg Arg Ala Phe Gly Ser Gly Tyr Arg Arg Asp
        275                 280                 285
Asp Asp Tyr Arg Gly Gly Gly Asp Arg Tyr Glu Asp Arg Tyr Asp Arg
    290                 295                 300
Arg Asp Asp Arg Ser Trp Ser Ser Arg Asp Asp Tyr Ser Arg Asp Asp
305                 310                 315                 320
Tyr Arg Arg Asp Asp Arg Gly Pro Pro Gln Arg Pro Lys Leu Asn Leu
                325                 330                 335
Lys Pro Arg Ser Thr Pro Glu Glu Asp Asp Ser Ser Ala Ser Thr Ser
            340                 345                 350
Gln Ser Thr Arg Ala Ala Ser Ile Phe Gly Gly Ala Lys Pro Val Asp
        355                 360                 365
Thr Ala Ala Arg Glu Arg Glu Val Glu Glu Arg Leu Gln Lys Glu Gln
    370                 375                 380
Glu Lys Leu Gln Arg Gln Trp Asn Glu Pro Lys Leu Glu Arg Arg Pro
385                 390                 395                 400
Arg Glu Arg His Pro Ser Trp Arg Ser Glu Glu Thr Gln Glu Arg Glu
                405                 410                 415
Arg Ser Arg Thr Gly Ser Glu Ser Ser Gln Thr Gly Thr Ser Thr Thr
            420                 425                 430
Ser Ser Arg Asn Ala Arg Arg Arg Glu Ser Glu Lys Ser Leu Glu Asn
        435                 440                 445
Glu Thr Leu Asn Lys Glu Glu Asp Cys His Ser Pro Thr Ser Lys Pro
    450                 455                 460
Pro Lys Pro Asp Gln Pro Leu Lys Val Met Pro Ala Pro Pro Pro Lys
465                 470                 475                 480
Glu Asn Ala Trp Val Lys Arg Ser Ser Asn Pro Pro Ala Arg Ser Gln
                485                 490                 495
Ser Ser Asp Thr Glu Gln Gln Ser Pro Thr Ser Gly Gly Gly Lys Val
            500                 505                 510
Ala Pro Ala Gln Pro Ser Glu Glu Gly Pro Gly Arg Lys Asp Glu Asn
        515                 520                 525
Lys Val Asp Gly Met Asn Ala Pro Lys Gly Gln Thr Gly Asn Ser Ser
    530                 535                 540
Arg Gly Pro Gly Asp Gly Gly Asn Arg Asp His Trp Lys Glu Ser Asp
545                 550                 555                 560
Arg Lys Asp Gly Lys Lys Asp Gln Asp Ser Arg Ser Ala Pro Glu Pro
                565                 570                 575
Lys Lys Pro Glu Glu Asn Pro Ala Ser Lys Phe Ser Ser Ala Ser Lys
            580                 585                 590
Tyr Ala Ala Leu Ser Val Asp Gly Glu Asp Glu Asn Glu Gly Glu Asp
        595                 600                 605
Tyr Ala Glu
    610
```

<210> 506
<211> 379
<212> PRT
<213> Homo sapiens
<400> 506

```
Met Ala Ala Ala Ala Ala Gln Gly Gly Gly Gly Gly Glu Pro Arg Arg
1                   5                  10                  15
Thr Glu Gly Val Gly Pro Gly Val Pro Gly Glu Val Glu Met Val Lys
            20                  25                  30
Gly Gln Pro Phe Asp Val Gly Pro Arg Tyr Thr Gln Leu Gln Tyr Ile
        35                  40                  45
Gly Glu Gly Ala Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg
    50                  55                  60
Lys Thr Arg Val Ala Ile Lys Lys Ile Ser Pro Phe Glu His Gln Thr
65                  70                  75                  80
Tyr Cys Gln Arg Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg
                85                  90                  95
His Glu Asn Val Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu
            100                 105                 110
Glu Ala Met Arg Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp
        115                 120                 125
```

Leu Tyr Lys Leu Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys
130 135 140
Tyr Phe Leu Tyr Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala
145 150 155 160
Asn Val Leu His Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr
165 170 175
Thr Cys Asp Leu Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp
180 185 190
Pro Glu His Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg
195 200 205
Trp Tyr Arg Ala Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys
210 215 220
Ser Ile Asp Ile Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser
225 230 235 240
Asn Arg Pro Ile Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His
245 250 255
Ile Leu Gly Ile Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile
260 265 270
Ile Asn Met Lys Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr
275 280 285
Lys Val Ala Trp Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu
290 295 300
Asp Leu Leu Asp Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr
305 310 315 320
Val Glu Glu Ala Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro
325 330 335
Thr Asp Glu Pro Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu
340 345 350
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Ala Arg Phe Gln Pro Gly Val Leu Glu Ala Pro
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35 40 45
Leu Gly Leu Gly Leu Tyr Tyr Ser Ser Asn Gly Ile Lys Glu Leu Glu
50 55 60
Tyr Asp Tyr Thr Gly Asp Pro Gly Thr Gly Asn Cys Ser Val Cys Ala
65 70 75 80
Ala Ala Gly Gln Gly Arg Ala Leu Pro Pro Pro Cys Ser Cys Ala Trp
85 90 95
Tyr Phe Ser Leu Pro Glu Leu Phe Gln Gly Pro Val Tyr Leu Tyr Tyr
100 105 110
Glu Leu Thr Asn Phe Tyr Gln Asn Asn Arg Arg Tyr Gly Val Ser Arg
115 120 125
Asp Asp Ala Gln Leu Ser Gly Leu Pro Ser Ala Leu Arg His Pro Val
130 135 140
Asn Glu Cys Ala Pro Tyr Gln Arg Ser Ala Ala Gly Leu Pro Ile Ala
145 150 155 160
Pro Cys Gly Ala Ile Ala Asn Ser Leu Phe Asn Asp Ser Phe Ser Leu
165 170 175
Trp His Gln Arg Gln Pro Gly Gly Pro Tyr Val Glu Val Pro Leu Asp
180 185 190
Arg Ser Gly Ile Ala Trp Trp Thr Asp Tyr His Val Lys Phe Arg Asn
195 200 205
Pro Pro Leu Val Asn Gly Ser Leu Ala Leu Ala Phe Gln Gly Thr Ala
210 215 220
Pro Pro Pro Asn Trp Arg Arg Pro Val Tyr Glu Leu Ser Pro Asp Pro
225 230 235 240
Asn Asn Thr Gly Phe Ile Asn Gln Asp Phe Val Val Trp Met Arg Thr

245 250 255
Ala Ala Leu Pro Thr Phe Arg Lys Leu Tyr Ala Arg Ile Arg Gln Gly
260 265 270
Asn Tyr Ser Ala Gly Leu Pro Arg Gly Ala Tyr Arg Val Asn Ile Thr
275 280 285
Tyr Asn Tyr Pro Val Arg Ala Phe Gly Gly His Lys Leu Leu Ile Phe
290 295 300
Ser Ser Ile Ser Trp Met Gly Gly Lys Asn Pro Phe Leu Gly Ile Ala
305 310 315 320
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Val Val Tyr Ile Arg Tyr Gln Asp Gln Asp Asp Asp Asp Glu Glu
340 345 350

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35 40 45
Lys Phe Tyr Phe Ala Phe Pro Gly Glu Ile Leu Met Arg Met Leu Lys
50 55 60
Leu Ile Ile Leu Pro Leu Ile Ile Ser Ser Met Ile Thr Gly Val Ala
65 70 75 80
Ala Leu Asp Ser Asn Val Ser Gly Lys Ile Gly Val Arg Ala Val Val
85 90 95
Tyr Tyr Phe Cys Thr Thr Leu Ile Ala Val Ile Leu Gly Ile Val Leu
100 105 110
Val Val Ser Ile Lys Pro Gly Val Thr Gln Lys Val Gly Glu Ile Ala
115 120 125
Arg Thr Gly Ser Thr Pro Glu Val Ser Thr Val Asp Ala Met Leu Asp
130 135 140
Leu Ile Arg Asn Met Phe Pro Glu Asn Leu Val Gln Ala Cys Phe Gln
145 150 155 160
Gln Tyr Lys Thr Lys Arg Glu Glu Val Lys Pro Pro Ser Asp Pro Glu
165 170 175
Met Asn Met Thr Glu Glu Ser Phe Thr Ala Val Met Thr Thr Ala Ile
180 185 190
Ser Lys Asn Lys Thr Lys Glu Tyr Lys Ile Val Gly Met Tyr Ser Asp
195 200 205
Gly Ile Asn Val Leu Gly Leu Ile Val Phe Cys Leu Val Phe Gly Leu
210 215 220
Val Ile Gly Lys Met Gly Glu Lys Gly Gln Ile Leu Val Asp Phe Phe
225 230 235 240
Asn Ala Leu Ser Asp Ala Thr Met Lys Ile Val Gln Ile Ile Met Cys
245 250 255
Tyr Met Pro Leu Gly Ile Leu Phe Leu Ile Ala Gly Lys Ile Ile Glu
260 265 270
Val Glu Asp Trp Glu Ile Phe Arg Lys Leu Gly Leu Tyr Met Ala Thr
275 280 285
Val Leu Thr Gly Leu Ala Ile His Ser Ile Val Ile Leu Pro Leu Ile
290 295 300
Tyr Phe Ile Val Val Arg Lys Asn Pro Phe Arg Phe Ala Met Gly Met
305 310 315 320
Ala Gln Ala Leu Leu Thr Ala Leu Met Ile Ser Ser Ser Ser Ala Thr
325 330 335
Leu Pro Val Thr Phe Arg Cys Ala Glu Glu Asn Asn Gln Val Asp Lys
340 345 350
Arg Ile Thr Arg Phe Val Leu Pro Val Gly Ala Thr Ile Asn Met Asp
355 360 365
Gly Thr Ala Leu Tyr Glu Ala Val Ala Ala Val Phe Ile Ala Gln Leu
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Asn Asp Leu Asp Leu Gly Ile Gly Gln Ile Ile Thr Ile Ser Ile Thr
385 390 395 400

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Ala Thr Ser Ala Ser Ile Gly Ala Ala Gly Val Pro Gln Ala Gly Leu
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Val Thr Met Val Ile Val Leu Ser Ala Val Gly Leu Pro Ala Glu Asp
            420                 425                 430
Val Thr Leu Ile Ile Ala Val Asp Trp Leu Leu Asp Arg Phe Arg Thr
        435                 440                 445
Met Val Asn Val Leu Gly Asp Ala Phe Gly Thr Gly Ile Val Glu Lys
    450                 455                 460
Leu Ser Lys Lys Glu Leu Glu Gln Met Asp Val Ser Ser Glu Val Asn
465                 470                 475                 480
Ile Val Asn Pro Phe Ala Leu Glu Ser Thr Ile Leu Asp Asn Glu Asp
                485                 490                 495
Ser Asp Thr Lys Lys Ser Tyr Val Asn Gly Gly Phe Ala Val Asp Lys
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Gly Ser Phe Gly Glu Val Phe Lys Gly Ile Asp Asn Arg Thr Gln Gln
        35                  40                  45
Val Val Ala Ile Lys Ile Ile Asp Leu Glu Glu Ala Glu Asp Glu Ile
    50                  55                  60
Glu Asp Ile Gln Gln Glu Ile Thr Val Leu Ser Gln Cys Asp Ser Ser
65                  70                  75                  80
Tyr Val Thr Lys Tyr Tyr Gly Ser Tyr Leu Lys Gly Ser Lys Leu Trp
                85                  90                  95
Ile Ile Met Glu Tyr Leu Gly Gly Gly Ser Ala Leu Asp Leu Leu Arg
            100                 105                 110
Ala Gly Pro Phe Asp Glu Phe Gln Ile Ala Thr Met Leu Lys Glu Ile
        115                 120                 125
Leu Lys Gly Leu Asp Tyr Leu His Ser Glu Lys Lys Ile His Arg Asp
    130                 135                 140
Ile Lys Ala Ala Asn Val Leu Leu Ser Glu Gln Gly Asp Val Lys Leu
145                 150                 155                 160
Ala Asp Phe Gly Val Ala Gly Gln Leu Thr Asp Thr Gln Ile Lys Arg
                165                 170                 175
Asn Thr Phe Val Gly Thr Pro Phe Trp Met Ala Pro Glu Val Ile Gln
            180                 185                 190
Gln Ser Ala Tyr Asp Ser Lys Ala Asp Ile Trp Ser Leu Gly Ile Thr
        195                 200                 205
Ala Ile Glu Leu Ala Lys Gly Glu Pro Pro Asn Ser Asp Met His Pro
    210                 215                 220
Met Arg Val Leu Phe Leu Ile Pro Lys Asn Asn Pro Pro Thr Leu Val
225                 230                 235                 240
Gly Asp Phe Thr Lys Ser Phe Lys Glu Phe Ile Asp Ala Cys Leu Asn
                245                 250                 255
Lys Asp Pro Ser Phe Arg Pro Thr Ala Lys Glu Leu Leu Lys His Lys
            260                 265                 270
Phe Ile Val Lys Asn Ser Lys Lys Thr Ser Tyr Leu Thr Glu Leu Ile
        275                 280                 285
Asp Arg Phe Lys Arg Trp Lys Ala Glu Gly His Ser Asp Asp Glu Ser
    290                 295                 300
Asp Ser Glu Gly Ser Asp Ser Glu Ser Thr Ser Arg Glu Asn Asn Thr
305                 310                 315                 320
His Pro Glu Trp Ser Phe Thr Thr Val Arg Lys Lys Pro Asp Pro Lys
                325                 330                 335
Lys Val Gln Asn Gly Ala Glu Gln Asp Leu Val Gln Thr Leu Ser Cys
            340                 345                 350
Leu Ser Met Ile Ile Thr Pro Ala Phe Ala Glu Leu Lys Gln Gln Asp
        355                 360                 365
Glu Asn Asn Ala Ser Arg Asn Gln Ala Ile Glu Glu Leu Glu Lys Ser
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Val Leu Leu Val Ala Ala Arg Pro Pro Gly Phe Gln Val Arg Glu Ala
        35                  40                  45
Ile Trp Arg Ser Leu Trp Pro Ser Glu Glu Leu Leu Ala Thr Phe Phe
    50                  55                  60
Arg Gly Ser Leu Glu Thr Leu Tyr His Ser Arg Phe Leu Gly Arg Ala
65                  70                  75                  80
Gln Leu His Ser Asn Leu Ser Leu Glu Leu Gly Pro Leu Glu Ser Gly
                85                  90                  95
Asp Ser Gly Asn Phe Ser Val Leu Met Val Asp Thr Arg Gly Gln Pro
            100                 105                 110
Trp Thr Gln Thr Leu Gln Leu Lys Val Tyr Asp Ala Val Pro Arg Pro
        115                 120                 125
Val Val Gln Val Phe Ile Ala Val Glu Arg Asp Ala Gln Pro Ser Lys
    130                 135                 140
Thr Cys Gln Val Phe Leu Ser Cys Trp Ala Pro Asn Ile Ser Glu Ile
145                 150                 155                 160
Thr Tyr Ser Trp Arg Arg Glu Thr Thr Met Asp Phe Gly Met Glu Pro
                165                 170                 175
His Ser Leu Phe Thr Asp Gly Gln Val Leu Ser Ile Ser Leu Gly Pro
            180                 185                 190
Gly Asp Arg Asp Val Ala Tyr Ser Cys Ile Val Ser Asn Pro Val Ser
        195                 200                 205
Trp Asp Leu Ala Thr Val Thr Pro Trp Asp Ser Cys His His Glu Ala
    210                 215                 220
Ala Pro Gly Lys Ala Ser Tyr Lys Asp Val Leu Leu Val Val Val Pro
225                 230                 235                 240
Val Ser Leu Leu Leu Met Leu Val Thr Leu Phe Ser Ala Trp His Trp
                245                 250                 255
Cys Pro Cys Ser Gly Lys Lys Lys Lys Asp Val His Ala Asp Arg Val
            260                 265                 270
Gly Pro Glu Thr Glu Asn Pro Leu Val Gln Asp Leu Pro
        275                 280                 285

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            20                  25                  30
Gly Ser Val Glu Met His Asp Val Lys Asn His Arg Thr Phe Leu Lys
        35                  40                  45
Arg Thr Lys Tyr Asp Asn Leu His Leu Glu Asp Leu Phe Ile Gly Asn
    50                  55                  60
Lys Val Asn Val Phe Ser Arg Gln Leu Val Leu Ile Asp Tyr Gly Asp
65                  70                  75                  80
Gln Tyr Thr Ala Arg Gln Leu Gly Ser Arg Lys Glu Lys Thr Leu Ala
                85                  90                  95
Leu Ile Lys Pro Asp Ala Ile Ser Lys Ala Gly Glu Ile Ile Glu Ile
            100                 105                 110
Ile Asn Lys Ala Gly Phe Thr Ile Thr Lys Leu Lys Met Met Met Leu
        115                 120                 125
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Ser Arg Lys Glu Ala Leu Asp Phe His Val Asp His Gln Ser Arg Pro
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Phe Phe Asn Glu Leu Ile Gln Phe Ile Thr Thr Gly Pro Ile Ile Ala
145                 150                 155                 160
Met Glu Ile Leu Arg Asp Asp Ala Ile Cys Glu Trp Lys Arg Leu Leu
                165                 170                 175
Gly Pro Ala Asn Ser Gly Val Ala Arg Thr Asp Ala Ser Glu Ser Ile
            180                 185                 190
Arg Ala Leu Phe Gly Thr Asp Gly Ile Arg Asn Ala Ala His Gly Pro
        195                 200                 205
Asp Ser Phe Ala Ser Ala Ala Arg Glu Met Glu Leu Phe Phe Pro Ser
    210                 215                 220
Ser Gly Gly Cys Gly Pro Ala Asn Thr Ala Lys Phe Thr Asn Cys Thr
225                 230                 235                 240
Cys Cys Ile Val Lys Pro His Ala Val Ser Glu Gly Leu Leu Gly Lys
                245                 250                 255
Ile Leu Met Ala Ile Arg Asp Ala Gly Phe Glu Ile Ser Ala Met Gln
            260                 265                 270
Met Phe Asn Met Asp Arg Val Asn Val Glu Glu Phe Tyr Glu Val Tyr
        275                 280                 285
Lys Gly Val Val Thr Glu Tyr His Asp Met Val Thr Glu Met Tyr Ser
    290                 295                 300
Gly Pro Cys Val Ala Met Glu Ile Gln Gln Asn Asn Ala Thr Lys Thr
305                 310                 315                 320
Phe Arg Glu Phe Cys Gly Pro Ala Asp Pro Glu Ile Ala Arg His Leu
                325                 330                 335
Arg Pro Gly Thr Leu Arg Ala Ile Phe Gly Lys Thr Lys Ile Gln Asn
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